

Set	Items	Description
S1	5	AU=(JAUGILAS J? OR JAUGILAS, J?)
S2	557089	DATA? ? OR NFORMATION OR INFO
S3	32277	NAVIGAT?
S4	2401124	SOFTWARE? ? OR PROGRAM? OR APPLICATION? ? OR FREEWARE? OR - SHAREWARE? OR SYSTEM? ?
S5	1049675	GEOGRAPH? OR LOCATION? OR AREA? ? OR REGION? ? OR ZONE? ? - OR SUBAREA OR SUBREGION? OR LOCALIT?
S6	917654	INTESECT? OR CROSS??? OR MEET? OR LINK? OR OVERLAP? OR ENC- ROACH?
S7	195923	INDEX?? OR INDICES OR POINTER? ?
S8	1113135	PARCEL? OR SPATIAL? OR SPACE? ? OR SEGMENT? OR GROUP? ? OR DIVISION? ?
S9	16439	S3(10N)S4
S10	5	S1 AND S9
S11	73621	S5(5N)S2
S12	792	S11(S)S9
S13	66	S12(S)S7
S14	115138	S5(5N)S6
S15	189	S14(S)S9
S16	40	S15(25N)(S7 OR S8)
S17	111	S12(15N)S8
S18	175	S10 OR S13 OR S16 OR S17
S19	39	S18 AND IC=G06F-017?

? show file

File 348:EUROPEAN PATENTS 1978-2004/May W04

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File 349:PCT FULLTEXT 1979-2002/UB=20040527, UT=20040520

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19/3,K/1 (Item 1 from file: 348)  
DIALOG(R) File 348:EUROPEAN PATENTS  
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01701527

**Establishment of network connections**

**Herstellung von Netzwerkverbindungen**

**Etablissement de connections reseau**

PATENT ASSIGNEE:

Hewlett-Packard Development Company, L.P., (4362380), 20555 S.H. 249,  
Houston, Texas 77070, (US), (Applicant designated States: all)

INVENTOR:

Christodoulou, Athena, 11 Co-operation Road, Easton, Bristol BS5 6EQ,  
(GB)  
Taylor, Richard, The Laurels Church Hill, Olveston, Bristol BS35 4BZ,  
(GB)  
Tofts, Christopher, Rockleaze Chaingate Lane, Iron Acton, Bristol BS37  
9XJ, (GB)

LEGAL REPRESENTATIVE:

Jones, Bruce Graeme Roland et al (69532), Hewlett-Packard Limited,  
Intellectual property Section, Filton Road, Stoke Gifford, Bristol BS34  
8QZ, (GB)

PATENT (CC, No, Kind, Date): EP 1394701 A2 040303 (Basic)

APPLICATION (CC, No, Date): EP 2003254544 030719;

PRIORITY (CC, No, Date): GB 217795 020731; GB 222696 021001

DESIGNATED STATES: AT; BE; BG; CH; CY; CZ; DE; DK; EE; ES; FI; FR; GB; GR;  
HU; IE; IT; LI; LU; MC; NL; PT; RO; SE; SI; SK; TR

EXTENDED DESIGNATED STATES: AL; LT; LV; MK

INTERNATIONAL PATENT CLASS: G06F-017/30

ABSTRACT WORD COUNT: 78

NOTE:

Figure number on first page: 3

LANGUAGE (Publication,Procedural,Application): English; English; English

FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS A	(English)	200410	516
SPEC A	(English)	200410	2785
Total word count - document A			3301
Total word count - document B			0
Total word count - documents A + B			3301

INTERNATIONAL PATENT CLASS: G06F-017/30

...SPECIFICATION In the present application the term "link" is intended to include within its scope a **pointer** from one location to another, which is actuatable to cause connection from the **location** of the **link** to the **location** to which the **link** points. In one embodiment a link is essentially a series of machine-executable instructions, usually...

19/3,K/2 (Item 2 from file: 348)

DIALOG(R) File 348:EUROPEAN PATENTS  
(c) 2004 European Patent Office. All rts. reserv.

01691953

**Establishment of network connections**

**Herstellung von Netzwerkverbindungen**

**Etablissement de connections reseau**

PATENT ASSIGNEE:

Hewlett-Packard Development Company, L.P., (4337790), 20555 S.H. 249,  
Houston, TX 77070, (US), (Applicant designated States: all)

INVENTOR:  
Athena, Christodoulou, 11 Co-operation Road, Easton, Bristol BS5 6EQ,  
(GB)  
Taylor, Richard The Laurels, Church Hill, Olveston, Bristol BS35 4BZ,  
(GB)  
Tofts, Christopher Rockleaze, Chaingate Lane, Iron Acton, Bristol BS37  
9XJ, (GB)

LEGAL REPRESENTATIVE:  
Jones, Bruce Graeme Roland et al (69532), Hewlett-Packard Limited,  
Intellectual property Section, Filton Road, Stoke Gifford, Bristol BS34  
8QZ, (GB)

PATENT (CC, No, Kind, Date): EP 1387302 A2 040204 (Basic)

APPLICATION (CC, No, Date): EP 2003254548 030719;

PRIORITY (CC, No, Date): GB 217795 020731; GB 222696 021001

DESIGNATED STATES: AT; BE; BG; CH; CY; CZ; DE; DK; EE; ES; FI; FR; GB; GR;  
HU; IE; IT; LI; LU; MC; NL; PT; RO; SE; SI; SK; TR

EXTENDED DESIGNATED STATES: AL; LT; LV; MK

INTERNATIONAL PATENT CLASS: G06F-017/30

ABSTRACT WORD COUNT: 80

NOTE:  
Figure number on first page: 3

LANGUAGE (Publication, Procedural, Application): English; English; English

FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS A	(English)	200406	626
SPEC A	(English)	200406	4830
Total word count - document A			5456
Total word count - document B			0
Total word count - documents A + B			5456

INTERNATIONAL PATENT CLASS: G06F-017/30

...SPECIFICATION In the present application the term "link" is intended to include within its scope a **pointer** from one location to another, which is actuatable to cause connection from the **location** of the **link** to the **location** to which the **link** points. In one embodiment a link is essentially a series of machine-executable instructions, usually...

19/3,K/3 (Item 3 from file: 348)  
DIALOG(R) File 348:EUROPEAN PATENTS  
(c) 2004 European Patent Office. All rts. reserv.

01691952  
Establishment of network connections  
Einrichtung von Netzverbindungen  
Etablissement de connexions reseau  
PATENT ASSIGNEE:  
Hewlett-Packard Development Company, L.P., (4337790), 20555 S.H. 249,  
Houston, TX 77070, (US), (Applicant designated States: all)

INVENTOR:  
Christodoulou, Athena, 11 Co-operation Road, Easton, Bristol BS5 6EQ,  
(GB)  
Taylor, Richard, The Laurels, Church Hill, Olveston, Bristol BS35 4BZ,  
(GB)  
Tofts, Christopher, Rockleaze, Chaingate Lane, Iron Acton, Bristol BS37  
9XJ, (GB)

**LEGAL REPRESENTATIVE:**

Jones, Bruce Graeme Roland et al (69532), Hewlett-Packard Limited,  
Intellectual property Section, Filton Road, Stoke Gifford, Bristol BS34  
8QZ, (GB)

PATENT (CC, No, Kind, Date): EP 1387301 A2 040204 (Basic)

APPLICATION (CC, No, Date): EP 2003254547 030719;

PRIORITY (CC, No, Date): GB 217795 020731; GB 222696 021001

DESIGNATED STATES: AT; BE; BG; CH; CY; CZ; DE; DK; EE; ES; FI; FR; GB; GR;  
HU; IE; IT; LI; LU; MC; NL; PT; RO; SE; SI; SK; TR

EXTENDED DESIGNATED STATES: AL; LT; LV; MK

INTERNATIONAL PATENT CLASS: G06F-017/30

ABSTRACT WORD COUNT: 80

**NOTE:**

Figure number on first page: 3

LANGUAGE (Publication, Procedural, Application): English; English; English

FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS A	(English)	200406	943
SPEC A	(English)	200406	4837
Total word count - document A			5780
Total word count - document B			0
Total word count - documents A + B			5780

INTERNATIONAL PATENT CLASS: G06F-017/30

...SPECIFICATION In the present application the term "link" is intended to include within its scope a **pointer** from one location to another, which is actuatable to cause connection from the **location** of the **link** to the **location** to which the **link** points. In one embodiment a link is essentially a series of machine-executable instructions, usually...

**19/3,K/4 (Item 4 from file: 348)**

DIALOG(R) File 348:EUROPEAN PATENTS

(c) 2004 European Patent Office. All rts. reserv.

01691951

Establishment of network connections

Einrichtung von Netzwerkverbindungen

Etablissement de connections de reseaux

**PATENT ASSIGNEE:**

Hewlett-Packard Development Company, L.P., (4362380), 20555 S.H. 249,  
Houston, Texas 77070, (US), (Applicant designated States: all)

**INVENTOR:**

Christodoulou, Athena, 11 Co-operation Road Easton, Bristol BS5 6EQ, (GB)  
Taylor, Richard, The Laurels Church Hill Olveston, Bristol BS35 4BZ,  
(GB)

Tofts, Christopher, Rockleaze Chaingate Lane Iron Acton, Bristol BS37 9XJ  
, (GB)

**LEGAL REPRESENTATIVE:**

Jones, Bruce Graeme Roland (69532), Hewlett-Packard Limited, Intellectual  
property Section, Filton Road, Stoke Gifford, Bristol BS34 8QZ, (GB)

PATENT (CC, No, Kind, Date): EP 1387300 A2 040204 (Basic)

APPLICATION (CC, No, Date): EP 2003254546 030719;

PRIORITY (CC, No, Date): GB 217795 020731; GB 222696 021001

DESIGNATED STATES: AT; BE; BG; CH; CY; CZ; DE; DK; EE; ES; FI; FR; GB; GR;  
HU; IE; IT; LI; LU; MC; NL; PT; RO; SE; SI; SK; TR

EXTENDED DESIGNATED STATES: AL; LT; LV; MK

INTERNATIONAL PATENT CLASS: G06F-017/30

ABSTRACT WORD COUNT: 80

NOTE:

Figure number on first page: 3

LANGUAGE (Publication,Procedural,Application): English; English; English  
FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS A	(English)	200406	942
SPEC A	(English)	200406	4854
Total word count - document A			5796
Total word count - document B			0
Total word count - documents A + B			5796

INTERNATIONAL PATENT CLASS: G06F-017/30

...SPECIFICATION In the present application the term "link" is intended to include within its scope a **pointer** from one location to another, which is actuatable to cause connection from the **location** of the **link** to the **location** to which the **link** points. In one embodiment a link is essentially a series of machine-executable instructions, usually...

19/3,K/5 (Item 5 from file: 348)

DIALOG(R)File 348:EUROPEAN PATENTS  
(c) 2004 European Patent Office. All rts. reserv.

01688846

Method and system for updating geographic databases

Verfahren und System zur Aktualisierung von geographischen Datenbanken

Procede et systeme d'actualisation des bases de donnees geographiques

PATENT ASSIGNEE:

Navigation Technologies Corporation, (2410913), The Merchandise Mart,  
Suite 900, Chicago, Illinois 60654, (US), (Applicant designated States:  
all)

INVENTOR:

Ashby, Richard A., 27993 Wild Rose Drive, Blue River Wisconsin 53518,  
(US)

LEGAL REPRESENTATIVE:

McLeish, Nicholas Alistair Maxwell et al (74621), Boult Wade Tennant  
Verulam Gardens 70 Gray's Inn Road, London WC1X 8BT, (GB)

PATENT (CC, No, Kind, Date): EP 1385102 A2 040128 (Basic)

APPLICATION (CC, No, Date): EP 2003254550 030721;

PRIORITY (CC, No, Date): US 201098 020723

DESIGNATED STATES: AT; BE; BG; CH; CY; CZ; DE; DK; EE; ES; FI; FR; GB; GR;  
HU; IE; IT; LI; LU; MC; NL; PT; RO; SE; SI; SK; TR

EXTENDED DESIGNATED STATES: AL; LT; LV; MK

INTERNATIONAL PATENT CLASS: G06F-017/30

ABSTRACT WORD COUNT: 150

NOTE:

Figure number on first page: 8

LANGUAGE (Publication,Procedural,Application): English; English; English  
FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS A	(English)	200405	1489
SPEC A	(English)	200405	9166
Total word count - document A			10655
Total word count - document B			0
Total word count - documents A + B			10655

INTERNATIONAL PATENT CLASS: G06F-017/30

...SPECIFICATION the end user's personal computer accesses the geographic database from the end user's **navigation system** and forms an updated **parcel** using the incremental update transaction and the **data** contained in the geographic database from the end user's **navigation system**. The updated **parcel** is then stored on media which is used in the end user's **navigation system**.

In another alternative, a third party receives the incremental updates and forms the updated **parcels** (and possibly the entire updated geographic database) on behalf of the end user. As an...

...CLAIMS the geographic databases is separated into parcels of data, wherein at least some of the **parcels** are **spatially organized parcels**, wherein each **spatially organized parcel** contains **data** that represent the **geographic** features encompassed within a separate one of a plurality of rectangular sub-areas into which...

...provide navigation-related features, using an updated geographic database that includes a combination of updated **parcels** of **data** and **parcels** from the **geographic** database at the first version level.

5. The method of Claim 1 further comprising:  
compressing...

19/3,K/6 (Item 6 from file: 348)

DIALOG(R)File 348:EUROPEAN PATENTS

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01660515

System and method for storing geographic data on a physical storage medium  
Vorrichtung und Verfahren zum Speichern von geographischen Daten auf einem  
physikalischen Speichermedium

Dispositif et methode pour la memorisation de donnees geographiques sur un  
support de memoire physique

PATENT ASSIGNEE:

Navigation Technologies Corporation, (2410913), The Merchandise Mart,  
Suite 900, Chicago, Illinois 60654, (US), (Applicant designated States:  
all)

INVENTOR:

Israni, Vijaya S., 4431 Bayside Circle, Hoffman Estates Illinois 60195,  
(US)

Ashby, Richard A., 3 Brookview Drive, Flat Rock, North Carolina 28731,  
(US)

Bouzide, Paul M., 1747 West Henderson Street, Chicago Illinois 60614,  
(US)

Jasper, John C., 824 North Drury Lane, Arlington Heights Illinois 60004,  
(US)

Fernekes, Robert P., 482 West Clare, Wooddale Illinois 60191, (US)

Nyczak, Gregory M., 835 The Pines, Hinsdale, Illinois 60521, (US)

Smith, Nicholas E., 209 Pleasant Street, Oak Park Illinois 60302, (US)

Lampert, David S., 650 Blackstone Place, Highland Park Illinois 60035,  
(US)

Meek, James A., 1523 East Anderson Drive, Palatine Illinois 60067, (US)

Crane, Aaron I., 670 Wren Avenue, Palatine Illinois 60067, (US)

LEGAL REPRESENTATIVE:

McLeish, Nicholas Alistair Maxwell et al (74621), Boult Wade Tennant

Verulam Gardens 70 Gray's Inn Road, London WC1X 8BT, (GB)

PATENT (CC, No, Kind, Date): EP 1365212 A1 031126 (Basic)

APPLICATION (CC, No, Date): EP 2003077520 971024;  
PRIORITY (CC, No, Date): US 740295 961025  
DESIGNATED STATES: AT; BE; CH; DE; DK; ES; FI; FR; GB; GR; IE; IT; LI; LU;

MC; NL; PT; SE

RELATED PARENT NUMBER(S) - PN (AN):

EP 838663 (EP 97308527)

INTERNATIONAL PATENT CLASS: G01C-021/32; G01C-021/20; G08G-001/0968;  
G09B-029/10; G06F-017/30 ; G08G-001/0969

ABSTRACT WORD COUNT: 321

NOTE:

Figure number on first page: NONE

LANGUAGE (Publication, Procedural, Application): English; English; English  
FULLTEXT AVAILABILITY:

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CLAIMS A	(English)	200348	1516
SPEC A	(English)	200348	31166
Total word count - document A			32682
Total word count - document B			0
Total word count - documents A + B			32682

...INTERNATIONAL PATENT CLASS: G06F-017/30

...ABSTRACT A1

An improved method and system for storage of **geographic data** on physical storage media. The **geographic data** are stored in a manner that facilitates and enhances use and access of the data by various **navigation application** functions in **navigation systems** that use the **data**. The **geographic data** includes a **parcelization** that separates the **geographic data** into **parcels** having less than or equal to a maximum **parcel** size but having at least a desired fill percentage. The **parcelization** method also provides for a **division** arrangement that facilitates addressing and identification of the **parcels**. According to a further aspect, the **geographic data** includes special nodal entities that are used to collapse complex intersections, such as roundabouts, cloverleaves...

...and used in a route calculation program in place of regular node entities. Further, the **geographic data** include a normalized attribute array that includes reoccurring combinations of certain selected attributes of the **geographic data**. Indices to the array are included in place of data corresponding to the selected attributes. When a **navigation application program** requests data, an entry in the normalized attribute table pointed to by an **index** in the data is used to return the requested data in the particular combination of attributes from the normalized attribute array. The **geographic data** is compiled by a method that facilitates access to the data on a physical medium...

...SPECIFICATION in a manner that facilitates and enhances use and access of the data by various **navigation application** functions in **navigation systems** that use the data.

According one aspect, there is provided a **parcelization** method for dividing the geographic data into separate parcels. The **parcelization** method provides for **parcels**...

...route calculation.

According to a still further aspect, a physical storage medium has stored thereon **geographic data** that includes at least one normalized attribute array. The normalized attribute array is provided as...

...storage medium. The normalized attribute array includes reoccurring combinations of certain selected attributes within the geographic data . Within entity records in the geographic data , indices are included in place of data corresponding to the selected attributes. The indices refer to entries in the normalized attribute array. When a navigation application program accesses a data entity, the entry in the normalized attribute table pointed to by the index in the data entity is used to build the entire data record including the particular combination of attributes pointed to by the index . By including combinations of geographic data attributes in a normalized attribute array, storage space on the medium can be conserved and access to the data can be improved.

According...

...According to a still further aspect, shape points are generated for data entities that represent segments of roads. In collecting geographic data for use in navigation systems , shape points are determined for segments of roads that bend or curve so that the position of points along the road segment can be accurately determined. When road segments are straight, shape points are generally not included. When used in a navigation system , this lack of shape points for long, straight portions of a road segment may result in difficulty associating the road segment with a particular locality during map display...The aspects of the organization of the geographic data that facilitate the navigation functions include parcelization and parcel identification of the geographic data , and the inclusion of normalized attributes, supernodes, and segment aggregation in the geographic data . Each of these aspects is described in more detail below,

Each navigation function application or subprogram 28, 30, 32, and 34, typically uses only a specific subset of the...  
...or may have different performance requirements.

Referring to FIG. 3, in a preferred embodiment, the geographic data 40 are organized as separate groups or subsets of the geographic data . Each of the groups includes different portions or collections of the data. The portion of the data included in each of the groups of the geographic data is related to the navigation application function that utilizes the specific collection of the data. In general, each of the functions...

...larger total database data content and potentially less efficient access.

Another factor used to determine parcel size includes the memory constraints of the navigation system that will use the data. Many navigation systems have limited memory, or memory that is optimized for use with certain-sized blocks of...

...possible, these types of hardware requirements are also considered in determining the size of a data parcel .

The geographic data 40 includes one separate group 48 of parcels of data used by the route calculation function 28, another separate group 50 of parcels...

...physical media, such as CD-ROM disc, PC card, etc.

Some of the subsets of geographic data are organized spatially . Spatially -organized data are arranged so that the data that represent geographically proximate features are located physically proximate in the data set 40 and on the medium 22. For some of the navigation application functions, spatial organization of their respective data provides for reading closely related geographic data from the medium more quickly and loading related geographic data into memory where it can

...  
...groupings or parcels. For some map data, the parcels are spatially-organized, i.e. each **parcel** represents geographic data encompassed with a geographic rectangular area (including square areas) of the physical **region**.

The groupings of **data** into **parcels** are made for several purposes. First, data are organized into **parcels** in an attempt to group into one **parcel**, or as few parcels as possible, most...

...be handled. Another reason that data are parcelized is so that data are grouped into **parcels** with each **parcel** having a size that can be readily used by the **navigation system applications**. These sizes relate to hardware and memory constraints and may be regular multiples of 2Kbytes...same in all physical storage formats, since it is accessible to generic independent components of **navigation applications**.

The following conventions are used for data types in the map data **parcel** headers: Bytes in map data are in Big Endian form (most significant bit first), and...attribute array that includes the particular combination of attributes that had been replaced.

In a **geographic data** set in which certain of the attributes are replaced by **indexes** to a global normalized attribute array, it is possible that some of the records cannot be **indexed** to the array. These records would include those in which the combination of attributes is...

...records are not included in the global normalized array, these records would not include an **index** to the global normalized attribute array. For records having less common attribute combinations, a separate...

...the same unusual combination of attributes not found in the global normalized attribute array, the **index** in each of the records that has this particular unusual combination of attributes refers to...

...the local array. In a present embodiment, all the records in the **parcel** include an **index** to either the global normalized attribute array or to the local normalized attribute array. This...

...it is not efficient to load such unusual combinations into memory unless needed by the **navigation application** when using the particular **parcel** that includes them.

For example, referring to FIG. 7B, the route calculation function 28 is ...the **parcel**. The cells may be defined by a regular grid pattern overlaid on the **parcel**. A header is created in the **parcel** to identify the **parcel** cell structure.

The cells represent relatively large non- **overlapping** geographic rectangles within the **parcel**'s coverage area. This facilitates the extraction of data corresponding to a search rectangle that **overlaps** the **parcel**'s coverage **area**. The cells are additionally used for managing zooming and panning of a geographic area represented by the cartographic data in the **parcel** by a map display **navigation application** function. Although a preferred embodiment of the **navigation** system may read data only in whole **parcels** from the medium, the data are compressed. Therefore, by using a cell structure, only a subset of the data in the **parcel**, i.e., the cell content, needs to be expanded and returned to the **navigation application** to display a map location at a given zoom level. Without such subdivision, it would be necessary to expand and examine an entire **parcel** to locate data within the search rectangle. Neighboring subsets or cells of the data can...output file 1001 is stored on the physical medium, such as a CD-ROM, the **parcel** ID information permits rapid **location** of the **data** on the medium since

the parcel ID references in the data correspond directly to locations on the medium. That is, in the embodiment described above, the parcel ID represents an offset (plus parcel size) from the start of the single map data...

...CLAIMS region, wherein said geographic database is stored on a storage medium, and further wherein said geographic database includes segment data entities corresponding to portions of roads in the geographic area and nodal data entities corresponding to points in the geographic area including intersections of roads,

wherein said improvement...

...region, wherein said geographic database is stored on a storage medium, and further wherein said geographic database includes segment data entities corresponding to portions of roads in the geographic area and nodal data entities corresponding to points in the geographic area including intersections of roads, wherein said improvement...

19/3,K/7 (Item 7 from file: 348)

DIALOG(R)File 348:EUROPEAN.PATENTS

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01358672

Method and system for accessing spatially organized geographic data in blocks

Methode und System des Zugriffes auf raumlich und in Blöcken organisierte geographische Daten

Procedé et système d'accès aux données géographiques organisées spatialement en blocs

PATENT ASSIGNEE:

Navigation Technologies Corporation, (2410913), The Merchandise Mart,  
Suite 900, Chicago, Illinois 60654, (US), (Applicant designated States:  
all)

INVENTOR:

Ashby, Richard A., 27993 Wild Rose Drive, Blue River, Wisconsin 53518,  
(US)

LEGAL REPRESENTATIVE:

McLeish, Nicholas Alistair Maxwell et al (74621), Boult Wade Tennant  
Verulam Gardens 70 Gray's Inn Road, London WC1X 8BT, (GB)

PATENT (CC, No, Kind, Date): EP 1158428 A2 011128 (Basic)  
EP 1158428 A3 040526

APPLICATION (CC, No, Date): EP 2001303655 010420;

PRIORITY (CC, No, Date): US 576779 000523

DESIGNATED STATES: AT; BE; CH; CY; DE; DK; ES; FI; FR; GB; GR; IE; IT; LI;  
LU; MC; NL; PT; SE; TR

EXTENDED DESIGNATED STATES: AL; LT; LV; MK; RO; SI

INTERNATIONAL PATENT CLASS: G06F-017/30

ABSTRACT WORD COUNT: 149

NOTE:

Figure number on first page: 1

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FULLTEXT AVAILABILITY:

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CLAIMS A (English) 200148 590

SPEC A (English) 200148 3095

Total word count - document A 3685

Total word count - document B 0  
Total word count - documents A + B 3685

INTERNATIONAL PATENT CLASS: G06F-017/30

...SPECIFICATION stored on various physical media, such as CD-ROM disks, DVD disks, hard drives, etc. **Parcelized** geographic data are accessed from such media and used by **navigation systems** and **navigation applications**.

Determining the best size to **parcelize geographic data** involves balancing several different factors. When a **navigation system** reads data from a medium into the memory of the **navigation system** (or other computing platform), there is overhead associated with each I/O operation. For example...spatial parcels in units optimally sized for the platform. If the compiler had initially generated **parcels** of that optimal size, then the **navigation software** would be discarding units of that size when re-using buffer memory. Treating the **parcel** block as a unit when managing buffers therefore approximates the behavior that would occur anyway if **parcels** were optimally sized for the platform.

#### 9. Distribution of **geographic data** to various computing platforms

Figure 6 illustrates how a **geographic database** can be formed with **parcels** of a given size and then copies of the **geographic database** distributed to systems implemented...

19/3,K/8 (Item 8 from file: 348)

DIALOG(R) File 348:EUROPEAN PATENTS  
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01074799

**Memory management for navigation system**  
**Speicherverwaltung fur Navigationssystem**  
**Gestion de memoire pour systeme de navigation**  
**PATENT ASSIGNEE:**

Navigation Technologies Corporation, (2410913), The Merchandise Mart,  
Suite 900, Chicago, Illinois 60654, (US), (Applicant designated States:  
all)

**INVENTOR:**

Crowley, Paul, 2243 Avalon Drive, Buffalo Grove, Illinois 60089, (US)  
Jaugilas, John , 135 N. Main Street, Lombard, Illinois 60148, (US)  
Natesan, Senthil, 397 Burke Drive, Carol Stream, Illinois 60188, (US)  
Lampert, David S., 650 Blackstone Place, Highland Park, Illinois 60035,  
(US)

Nash, Alex, 4481 Country Trails, Gurnee, Illinois 60031, (US)

**LEGAL REPRESENTATIVE:**

McLeish, Nicholas Alistair Maxwell et al (74621), Boult Wade Tennant  
Verulam Gardens 70 Gray's Inn Road, London WC1X 8BT, (GB)

**PATENT (CC, No, Kind, Date):** EP 945706 A2 990929 (Basic)  
EP 945706 A3 030723

**APPLICATION (CC, No, Date):** EP 99302263 990324;

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**EXTENDED DESIGNATED STATES:** AL; LT; LV; MK; RO; SI

**INTERNATIONAL PATENT CLASS:** G01C-021/20; G01C-021/26; G06F-009/38;  
G06F-012/00; G06F-017/30 ; G11B-027/00; G06T-017/50; G09B-029/00

**ABSTRACT WORD COUNT:** 193

**NOTE:**

Figure number on first page: 1

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Available Text	Language	Update	Word Count
CLAIMS A	(English)	9939	1492
SPEC A	(English)	9939	12225
Total word count - document A			13717
Total word count - document B			0
Total word count - documents A + B			13717

Memory management for navigation system  
Gestion de memoire pour systeme de navigation  
INVENTOR:  
... US)  
Jaugilas, John ...  
...INTERNATIONAL PATENT CLASS: G06F-017/30

...ABSTRACT A2

A method and system for managing memory resources in a **system** used in conjunction with a **navigation application program** that accesses geographic data. The geographic data are comprised of a plurality of data records...

...One or more buffers each that forms a contiguous portion of the memory of the **navigation system** is provided as a cache to store a plurality of **parcels**. One or more data structures located outside the contiguous portion of memory identify the parcels...

SPECIFICATION BACKGROUND OF THE INVENTION

The present **application** relates to **navigation systems** and in particular, the present **application** relates to memory management for a **navigation system** that facilitates use and access of a geographic database.

Computer-based **navigation systems** are available that provide end-users with various **navigating** functions and features. For example, some **navigation systems** are installed in vehicles and are able to provide end-users (i.e., drivers of...

...and optionally from equipment that can determine one's physical location (such as a **GPS system**), a **navigation application program** in the **navigation system** can examine various routes between two locations to determine an optimum route to travel from a starting location to a destination location in a geographic region. The **navigation application program** may then provide the end-user with information about the optimum route in the form...

...the end-user to travel from the starting location to the destination location. If the **navigation system** is located in an automobile, the instructions may take the form of audio instructions that are provided along the way as the end-user is traveling the route. Some **navigation application programs** are able to show detailed maps on computer displays illustrating routes to destinations, the...

...of certain types of features, and so on.

In order to provide these and other **navigating** functions, the **navigation system** or **application** uses one or more detailed databases that include data which represent physical features in a...

...handling databases of the size and complexity sufficient to provide suitable functionality. However, computer-based **navigation systems** are provided on various platforms including some with relatively limited

computer hardware resources. For example, navigation systems that are located in vehicles or that are hand-held may have limited memory resources...

...users as well as suitably fast performance. Aside from being undesirable, slow performance in a navigation system may render the system0 useless for its intended purpose in certain circumstances. For example, if the navigation system is installed in a vehicle, the driver may require information from the navigation system about a desired route in a matter of seconds in order to utilize the information while driving. If the navigation system requires more than several seconds to calculate a route, the driver may have moved beyond the point at which the routing information provided by the navigation system is relevant. Therefore, there is a need to utilize the hardware resources in a navigation system efficiently in order to provide a suitable level of performance.

Some navigation applications may be provided on computer platforms that have greater memory and other hardware resources. On...

...available resources are used efficiently. Accordingly, it would be desirable to provide a method and system that utilizes the resources of a navigation system efficiently thereby enabling the system to provide better performance.

#### SUMMARY OF THE INVENTION

In accordance with the present invention there is provided a method and system for managing memory resources in a system used in conjunction with a navigation application program that accesses geographic data. The geographic data are comprised of a plurality of data records...

...One or more buffers that each form a contiguous portion of the memory of the navigation system are provided as a cache to store a plurality of parcels . One or more data structures located outside the contiguous portion of memory identify the parcels...

...cache.

#### BRIEF DESCRIPTION OF THE DRAWINGS

Figure 1 is a block diagram illustrating a navigation system

Figure 2 is a block diagram illustrating parts of the navigation application software of Figure 1.

Figure 3 shows a map of a geographic region used to illustrate...

...Figure 3.

Figure 5 is a diagram illustrating the utilization of memory resources in the navigation system of Figure 1.

Figure 6 is a diagram illustrating one of the buffers in the...is a diagram illustrating another defragmentation step.

#### DETAILED DESCRIPTION OF THE PRESENTLY PREFERRED EMBODIMENTS

##### I. NAVIGATION SYSTEM - OVERVIEW

Referring to Figure 1, there is a block diagram of a navigation system 10. The navigation system 10 is installed in a vehicle 11, such as a car or truck, although in alternative embodiments, the navigation system 10 may be located outside of a vehicle or may be implemented in various other platforms or environments, as described below.

Referring to the embodiment illustrated in Figure 1, the navigation system 10 is a combination of hardware and software components. In one

embodiment, the **navigation system** 10 includes a processor 12, a drive 14 connected to the processor 12, and a non-volatile memory storage device 16 for storing a **navigation application software program** 18, as well as other information, such as configuration parameters 19. The processor 12 may be of any type used in **navigation systems**, such as 32-bit processors using a flat address space, such as a Hitachi SHI...

...well as processors that may be developed in the future, may also be suitable.

The **navigation system** 10 may also include a positioning **system** 24. The positioning system 24 may utilize GPS-type technology, a dead reckoning-type system...

...a signal 26 to the processor 12. The signal 26 may be used by the **navigation application software** 18 that is run on the processor 12 to determine the location, direction, travel distance, speed, etc., of the **navigation system** 10.

The **navigation system** 10 also includes a user interface 31. The user interface 31 includes appropriate equipment that allows the end-user to input information into the **navigation system**. This input information may include a request to use the **navigation** features of the **navigation system**. For example, the input information may include a request for a route to a desired...

...kinds of information, such as configuration information. The equipment used to input information into the **navigation system** may include a keypad, a keyboard, a microphone, etc., as well as appropriate software, such...

...end-user. This equipment may include a display 27, speakers 29, or other means.

The **navigation system** 10 uses a map database 40 stored on a storage medium 32. The storage medium...

...drive 14 so that the map database 40 can be read and used by the **navigation system**. The storage medium 32 may be removable and replaceable so that a storage medium with...

...geographic database 40 do not have to be physically provided at the location of the **navigation system**. In alternative embodiments, the storage medium 32, upon which some or all of the geographic data 40 are stored, may be located remotely from the rest of the **navigation system** and portions of the geographic data provided via a communications link, as needed.

Referring to Figure 2, the **navigation application** 18 includes **software** programming that provides separate **navigation** functions (or subprograms) 28. These **navigation** functions 28 include, for example, a route calculation function 33, a map display function 34...

...route guidance function 35 (wherein detailed directions are provided for reaching a desired destination). The **navigation application program** 18 may include other functions or subprograms 36 in addition or alternatively to these, such as a vehicle positioning (e.g., map matching) function. Although these **navigation application** functions 28 are represented as separate subprograms or **applications** within the **navigation application program** 18, these functions 28 may be combined or otherwise provided. The **navigation application program** 18 also includes user interface programming 37 that supports the user interface equipment 31 (in...

...user via the user interface 31, the display of menus, prompts, and so on. The **navigation system** 10 may also include an operating **system**

program 38. The **navigation application** 18 may also include specific functions 39 that access the geographic database 40. In a preferred embodiment, these functions 39 are located between the various **navigation applications** 28 and the geographic database 40, or more particularly between the **navigation** functions 28 and the operating **system** 38. These functions 39 may include memory management functions, such as a cache manager function...

...storage medium.

There are several factors that can affect the operation and performance of the **navigation** functions 28 in the **navigation application** program 18 when using geographic data 40 on the storage medium 32. In order to provide...

...to provide suitable functionality. However, accessing these types of media can be relatively slow. Because **navigation systems** may be installed in vehicles or may be hand-held, the hardware resources of the **navigation system** may be limited. For example, these kinds of **navigation systems** may have limited memory and relatively slow media access rates. Due to the limited memory resources of these **navigation systems**, it is necessary to load geographic data as needed from a storage medium, such as a CD-ROM disk, into the memory of the **navigation system** for use by the **navigation application program**.

Unfortunately, as mentioned above, media access in these types of systems may also be relatively slow.

To address the constraints imposed by limited **navigation system** resources, techniques have been devised or implemented to improve **navigation system** performance by organizing, structuring, or arranging the geographic database or the data in the database in particular ways. Because a **navigation system** uses geographic data in certain known and expected ways to perform known functions, the geographic...

...or arranged in a manner that facilitates their use in these known ways by the **navigation system**.

**Navigation application** programs may also be run on computer platforms that have relatively more memory resources and...

...functionality can be provided if the geographic database can be formed and used efficiently.

b. **Parcelization**. Included among the techniques that can be used to facilitate the use of **geographic data** by **navigation systems** is **parcelization**. Assuming that all the **data** records for a given entire **geographic** region cannot be loaded into the memory of the **navigation system** at the same time, due to limited memory resources of the **navigation system** in which the **navigation application program** is being run, it would be desirable to load into memory only those data that ...

...order to perform a navigation function. To provide for this, the **data** are organized into **parcels**. When **data** are **parcelized**, the plurality of **data** records that together comprise the **geographic data** are grouped together into separate **groups** or **parcels**. A **parcel** of **data** is established so that all the **data** in the **parcel** are accessed together ...**parcelized** spatially in order to facilitate use of the **data** by the **navigation functions** 28. **Spatially - parcelized** **data** are arranged so that the **data** that represent **geographically proximate** features are located logically and/or physically proximate in the database 40 and/or on the medium 32. For some of the **navigation application** functions, **spatial parcelization** of their respective **data** provides for reading

closely related geographic data from the medium more quickly and loading related geographic data into memory where they can...

...quantity of data that is accessed at the same time from the medium by the navigation system, when a parcel of data is accessed, all of its data records are read into the memory of the navigation system at the same time. With reference to the map 111 of Figure 3, this means...

...This index is useful for initial location of an arbitrary position, such as when a program in a navigation system initially locates the map data corresponding to a current vehicle position. As the parcels 120...by administrative hierarchy. In a present embodiment, these non-spatially organized types of data are parcelized as well.

### III. ACCESSING THE GEOGRAPHIC DATABASE

The various separate navigation functions 28 of the navigation application 18 use the data in the geographic database 40 stored on the storage medium 32 in order to provide useful navigation features to the end-user of the navigation system 10. As mentioned above, the navigation application 18 includes functions 39 that access the geographic database 40. These accessing functions 39 work with the various navigation applications 28 and the geographic database 40. More particularly, these functions 39 may operate between the navigation functions 28 and the operating system 38. The data in the geographic database 40 on the medium 32 may be compressed, arranged, organized, parcelized, and indexed on the medium 32 to facilitate their use for various navigation functions. The accessing functions... . . . be stored on the medium, as well as information about the file structure of the geographic data on the medium, to find the requested data. The data finding function 56 may determine...

...data is located on the medium. The data finding function 56 may also determine the location of the desired data within the parcel. The navigation application may also include a data conversion function 57. The data conversion function 57 may provide...

...database. The accessing functions 39 may also provide for an acceptable level of performance in navigation systems that use the geographic database 40, provided that certain minimum resources are provided by the platform of the navigation system. Moreover, the access functions 39 may provide for efficiently utilizing additional resources above the minimum...

...this purpose. In this alternative, the operation of these accessing functions would be similar.

### IV. PARCEL CACHE

a. General. One way to provide improved performance in a navigation system is to implement a parcel cache in memory. Referring to Figure 2, during operation of the navigation system, the various navigating functions 28 formulate queries that identify the geographic data needed to perform the functions. These...the medium, accessed, and read more than once, significant time can be saved thereby improving system performance.

To improve performance of the navigation system, a cache is provided in the memory of the navigation system specifically for storing a number of parcels of geographic data that have been accessed and read from the medium. Figures 5-7 illustrate aspects of the parcel cache. Storing parcels of geographic data in a parcel

cache supports the navigating functions 28 by maintaining a number of geographic parcels in memory ready for use. The parcel cache accommodates those navigation functions that need to...

...parcel in memory ready to use avoids the relatively large delay associated with accessing the parcel from the medium again. The parcel cache may also be used to store parcels of geographic data that a navigation function predicts will be needed soon. Also, the parcel cache may be used to contain recently used parcels that one of the navigation functions...

...39.

Referring to Figure 5, there is a diagram illustrating the memory utilization in the navigation system 10. A portion 202 of the RAM 20 is used by the navigation functions 28 and...

...These portions 202 and 204 may be determined at the time of initialization of the navigation system based upon the total amount of installed memory in the system. In addition, a portion...

...28 or the accessing functions 39, or as parcel cache 207, during runtime of the navigation system based on the needs of the navigation system .

The parcel cache 207 includes one or more buffers 220. Each buffer 220 represents a portion of the memory 20 of the navigation system . Referring to Figure 6, there is a diagram of one of the buffers 220 that ...

...affects the size of the parcel cache is the total available memory resources of the navigation system . Navigation systems with limited memory resources may provide a relatively small portion for the parcel cache. Navigation systems with greater memory resources may provide relatively more memory for parcel cache.

Another consideration that...in the parcel cache before the data in the parcels are actually needed by the navigation application function. To pre-cache, a navigation function implements an algorithm that predicts which data will be needed before they are actually...

...of the memory allocated to the parcel cache 207 and the memory allocated to the navigation application functions 28. A relatively large allocation of memory for parcel cache 207 may not necessarily improve performance of a navigation system if the amount of memory available for the navigation functions 28 is constrained, and vice versa.

Still another consideration is that with a small...

...amount of memory allocated for parcel cache should not constrain the memory requirements of the navigation application functions 28. For example, a relatively large cache of 1 M (which would hold approximately ...

...Pool and Hash Table. Storing parcels in a parcel cache can provide advantages both for navigation systems that have limited resources as well as navigation systems that have greater resources. However, using the parcel cache efficiently can yield further improvements in navigation system performance. For example, as mentioned above, parcels may be of different sizes, e.g., 8...pre-caching. Although pre-caching can be a valuable way to enhance performance of a navigation system , it can detract from performance if it occurs when the navigation system resources are needed for an immediate data request. Accordingly, it is desired to provide a...

...to pre-cache requests for this purpose. This facilitates canceling pre-cache requests if the **navigation system** resources are needed to satisfy an immediate request for data from the navigation functions 28... of pre-cache requests may be canceled.

f. Defragmentation

As mentioned above, each of the **parcels of geographic data** read from the medium is stored in the **parcel cache** from which it is then used to provide data to the requesting navigation functions...

...**parcel** from the medium occurs. Once the **parcel** is in the **parcel cache** 207, the **parcel** is locked in the buffer when the buffer address is returned to the **navigation application**. This prevents the buffer from being swapped out when a request is active. This lock is released when the **parcel** is released by the **navigation application** 28.

Most of the time, the **parcel** cache is full and unable to accommodate new **parcels** without discarding existing blocks. Sometimes, a rearrangement of the blocks within the cache can coalesce...

...rather than move them around to defragment the cache.

g. Space Allocation

Typically, after the **navigation system** has been operated for a while, the only free space within the cache are small...embodiments versatile so that the same cache system can be used in both relatively small **systems**, such as hand-held **navigation systems** and in-vehicle **systems** with relatively little memory, and relatively larger systems, such as networked servers with lots of...

...are represented by the **parcel headers** contained in the header pool.

In alternative embodiments, the **navigation system** should be understood to include any computer-based **system** that provides **navigation** functions to an end-user regardless of hardware platform or architecture. For example, the **navigation system** may include any kind of portable **system**, such as hand-held systems or systems installed on personal digital assistants or personal computers. In alternative embodiments, the **navigation system** may include **navigation application** software installed on a personal computer, such as a desktop computer. Further, the **navigation system** may be implemented in various different environments, including networked environments and client-server platform environments. The **navigation application program** and the geographic database need not be located in the same location, but may connect...certain terminology is used to refer to components, data structures, and so on in the **navigation system** and **application**. Other terminology may be used to refer to these kinds of components, data structures, and...

CLAIMS 1. A **system** for managing memory for a **navigation system** that uses geographic data, the **system** comprising a cache occupying a portion of said memory and used for holding portions of...

...the portion of said memory occupied by said cache is allocated at initialization of said **navigation system**.

6. The invention of Claim 1 wherein said portion of memory occupied by said cache...

...physical medium is a CD-ROM disc.

12. The invention of Claim 1 wherein said **navigation system** comprises multiple **parcel caches**.

13. The invention of Claim 1 wherein said portions of the...

...minimum amount of said geographic data that can be accessed at a time by said navigation system in a single read operation.

21. A cache management system for a navigation system that uses a geographic database and that has a memory, said cache management system comprising...

...identifiers, each of which refers to said header information in said header pool,

whereby a parcel contained in said cache can be located.

22. A method for operating a navigation system including a memory, wherein the navigation system executes a navigation application program to provide navigation functions and uses a geographic database having data records that represent geographic features in a of said memory for use as a parcel cache;

during execution of the navigation application program to provide said navigation functions, storing parcels of data read from said medium into said parcel cache;

storing data...

...23 wherein said index is a hash table.

25. A method of operating a navigation system that includes a memory, wherein the navigation system executes a navigation application program to provide navigation functions and uses a geographic database having data records that represent geographic features in a geographic region, wherein said geographic database is organized into a plurality of parcels each of which includes a plurality of the data records, the method comprising the steps...

...table in said memory, said hash table indexed on identification data of each of said parcels in said parcel cache.

29. A method for operating a navigation system including a memory, wherein the navigation system executes a navigation application program to provide navigation functions and uses a geographic database having data records that represent geographic features in a...

19/3,K/9 (Item 9 from file: 348)

DIALOG(R)File 348:EUROPEAN PATENTS

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01072700

Interleaving of data types in a geographic database and methods for use thereof in a navigation application

Verschachtelung von Datentypen in einer geographischen Datenbank und ihr Verwendungsverfahren in einer Navigationsanwendung

Imbrication de types de donnees dans une base de donnees geographique et methodes pour l'utiliser dans une application de navigation

PATENT ASSIGNEE:

Navigation Technologies Corporation, (2410913), The Merchandise Mart, Suite 900, Chicago, Illinois 60654, (US), (Applicant designated States: all)

INVENTOR:

Livshutz, Michael, 7867 Nordica Avenue, Niles, Illinois 60714, (US)  
Israni, Vijaya S., 4431 Bayside Circle, Hoffman Estates, Illinois 60195, (US)

Ashby, Richard A., 27993 Wild Rose Drive, Blue River, Wisconsin 53518, (US)

LEGAL REPRESENTATIVE:

McLeish, Nicholas Alistair Maxwell et al (74621), Boult Wade Tennant Verulam Gardens 70 Gray's Inn Road, London WC1X 8BT, (GB)

PATENT (CC, No, Kind, Date): EP 943894 A2 990922 (Basic)

navigation functions that use these different types to access the records more quickly and efficiently. A geographic data base includes records representing various geographic features.

**DETAILED DESCRIPTION** - The navigation system (10) is a combination of hardware and software components. It consists of a processor (12), a drive (14) connected to the processor and a nonvolatile storage memory device (16) for storing the **navigation application software program** (18). 32-bit processors with a flat address space are typically used.

USE - Method is used in navigation systems.

ADVANTAGE - Switching between different data types is accelerated.

**DESCRIPTION OF DRAWING(S)** - The figure shows a block diagram of the navigation system.

Processor (12)

Drive (14)

Memory device (16)

Navigation program (18)

pp; 35 DwgNo 1/23

Title Terms: GEOGRAPHICAL; DATA; BASE; INTERLEAVED; DATA; TYPE; NAVIGATION;  
APPLY

Derwent Class: P85; S02; T01

International Patent Class (Main): G01C-021/20; G06F-017/30 ; G09B-029/00

International Patent Class (Additional): G01C-021/00; G08G-001/0969;  
G09B-029/10

File Segment: EPI; EngPI

19/5/38 (Item 29 from file: 350)

DIALOG(R) File 350:Derwent WPIX

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012130523 \*\*Image available\*\*

WPI Acc No: 1998-547435/199847

XRPX Acc No: N98-426665

**Aeronautical navigation control system in automatic dependent monitoring environment - transmits operation rule to aircraft system automatically from ground control, when aircraft enters micro airspace, for pilot to control aircraft**

Patent Assignee: OKI ELECTRIC IND CO LTD (OKID ); TOSHIBA KK (TOKE ); UNYUSHO SENPAKU GIJUTSU KENKYUSHOCHO (UNYU-N); OKI DENKI KOGYO KK (OKID ); SHIP RES INST (SHIP-N); TOSHIBA CORP (TOKE )

Inventor: KUSUI Y; NAKAJIMA T; NAKAUE K; NISHIDA M; OTSUKA R; SHIOMI K; TAKA Y

Number of Countries: 003 Number of Patents: 003

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
JP 10241100	A	19980911	JP 9743626	A	19970227	199847 B
KR 98071756	A	19981026	KR 986160	A	19980226	199953
US 6064939	A	200000516	US 9828778	A	19980224	200031

Priority Applications (No Type Date): JP 9743626 A 19970227

Patent Details:

Patent No Kind Lan Pg Main IPC Filing Notes

JP 10241100 A 11 G08G-005/02

KR 98071756 A G08G-005/00

US 6064939 A G06F-165/00

Abstract (Basic): JP 10241100 A

The system divides automatically an approach control division in a micro airspace. The operation rule for aircraft guidance is set in

the micro airspace considering the prohibited areas (1-3 - 1-7) in the airspace.

The operation rule sets scheduled landing time and time of crossing into approach control area , and variations in weather situation in the approach control division . The operation rule is automatically transmitted to aircraft for its guidance when the aircraft enters the micro airspace. The pilot controls the aircraft as per the operation rule.

ADVANTAGE - Provides safety procedures in real time automatically. Reduces work force and work load of ground control. Reduces human error.

Dwg.1/18

Title Terms: AERONAUTIC; NAVIGATION; CONTROL; SYSTEM; AUTOMATIC; DEPEND; MONITOR; ENVIRONMENT; TRANSMIT; OPERATE; RULE; AIRCRAFT; SYSTEM; AUTOMATIC; GROUND; CONTROL; AIRCRAFT; ENTER; MICRO; AIRSPACE; PILOT; CONTROL; AIRCRAFT

Derwent Class: W06

International Patent Class (Main): G06F-165/00 ; G08G-005/00; G08G-005/02

International Patent Class (Additional): G08G-005/04; H04N-007/18

File Segment: EPI

19/5/39 (Item 30 from file: 350)

DIALOG(R) File 350:Derwent WPIX

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012022647 \*\*Image available\*\*

WPI Acc No: 1998-439557/199838

XRPX Acc No: N98-342538

Map display geographic information system e.g. for car navigation - includes geographic information search server which generates combination list of geographic information servers and displays geographic information obtained from servers while superimposing information

Patent Assignee: KOKUSAI DENSHIN DENWA CO LTD (KOKU )

Inventor: TAKAGI S

Number of Countries: 026 Number of Patents: 004

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
EP 860787	A2	19980826	EP 98410014	A	19980224	199838	B
JP 10240124	A	19980911	JP 9755454	A	19970225	199847	
US 6107961	A	20000822	US 9828484	A	19980224	200042	
JP 3503397	B2	20040302	JP 9755454	A	19970225	200416	

Priority Applications (No Type Date): JP 9755454 A 19970225

Patent Details:

Patent No Kind Lan Pg Main IPC Filing Notes

EP 860787 A2 E 18 G06F-017/30

Designated States (Regional): AL AT BE CH DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI

JP 10240124 A 11 G09B-029/00

US 6107961 A G01S-007/185

JP 3503397 B2 11 G09B-029/00 Previous Publ. patent JP 10240124

Abstract (Basic): EP 860787 A

The map display system includes a number of geographic information servers (3), a geographic information search server (2) and clients connected to each other through a network. The geographic information server includes a geographic information database (3a) and a geographic information control unit (3b). The control unit (3b) affects functions of searching geographical information, generation of geographical

information in accordance with parameters of **index** information, conversion of **geographic** information into image **data**, and transmission of image **data** to clients. The **geographic** information search server includes an **index** information database (2a) and a geographic information search unit (2b) generating a combination list of several geographic information servers.

The search unit determines combination of geographic information servers most suitable for the search condition by clients, parameters based on items of inherent functions of the information servers in **index** information and parameters based on common items of the whole geographic information servers in **index** information. The clients obtain information from the servers designated by the combination list and display the obtained information while superimposing them so that their coordinates coincide each other on the same screen.

**ADVANTAGE** - Various information which cannot be provided by one server can be provided by several servers on network. Clients can easily display image data at image level while superimposing it. Function of conversion can be relatively easily provided as middleware of existing information server, and several information server groups with different specifications from each other can be used as information servers with same specifications.

Dwg.1b/4

Title Terms: MAP; DISPLAY; GEOGRAPHICAL; INFORMATION; SYSTEM; CAR; NAVIGATION; GEOGRAPHICAL; INFORMATION; SEARCH; SERVE; GENERATE; COMBINATION; LIST; GEOGRAPHICAL; INFORMATION; SERVE; DISPLAY; GEOGRAPHICAL; INFORMATION; OBTAIN; SERVE; SUPERIMPOSED; INFORMATION

Derwent Class: P85; T01

International Patent Class (Main): G01S-007/185; G06F-017/30 ; G09B-029/00

International Patent Class (Additional): G06F-013/00 ; G06T-001/00;

G06T-011/60; G06T-017/50

File Segment: EPI; EngPI

19/5/40 (Item 31 from file: 350)

DIALOG(R) File 350:Derwent WPIX

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011815818 \*\*Image available\*\*

WPI Acc No: 1998-232728/199821

Related WPI Acc No: 1999-570571; 1999-609600; 2000-095406; 2004-024612

XRPX Acc No: N98-184363

**Record storing method for storing geographical data on storage medium - by separating geographic data into parcels having desired fill value and dividing arrangement that enables their addressing and identification**

Patent Assignee: NAVIGATION TECHNOLOGIES CORP (NAVI-N); ASHBY R A (ASHB-I); ISRANI V S (ISRA-I); NYCZAK G M (NYCZ-I); SMITH N E (SMIT-I)

Inventor: ASHBY R A; BOUZIDE P M; CRANE A I; FERNEKES R P; ISRANI V; JASPER J C; LAMPERT D S; MEEK J A; NYCZAK G M; SMITH N E; ISRANI V S

Number of Countries: 021 Number of Patents: 007

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
EP 838663	A2	19980429	EP 97308527	A	19971024	199821 B
CA 2219043	A	19980425	CA 2219043	A	19971024	199836
JP 10312153	A	19981124	JP 97332262	A	19971027	199906
US 6308177	B1	20011023	US 96740295	A	19961025	200165
			US 99362947	A	19990728	
CA 2219043	C	20030218	CA 2219043	A	19971024	200327
EP 838663	B1	20031022	EP 97308527	A	19971024	200373
			EP 200377520	A	19971024	

DE 69725677 E 20031127 DE 625677 A 19971024 200403  
EP 97308527 A 19971024

Priority Applications (No Type Date): US 96740295 A 19961025; US 99362947 A 19990728

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MC NL PT SE

CA 2219043 A G06F-017/00

JP 10312153 A 169 G09B-029/10

US 6308177 B1 G06F-017/30 Div ex application US 96740295  
Div ex patent US 5968109

CA 2219043 C E G06F-017/00

EP 838663 B1 E G01C-021/20 Related to application EP 200377520

Designated States (Regional): AT BE CH DE DK ES FI FR GB GR IE IT LI LU  
MC NL PT SE

DE 69725677 E G01C-021/20 Based on patent EP 838663

Abstract (Basic): EP 838663 A

The method includes separating the number of records into first and second groups of records so that the records in the first group represent physical features having geographic locations encompassed within a first sub-rectangular area and the records in the second group represent physical features having geographic locations encompassed within a second sub-rectangular area.

The two sub-rectangular areas are formed by a division at a position of a rectangular area that encompasses the locations of the physical features represented by the number of records in the first and second groups. The position of the division is determined by evaluating a number of trial divisions of the rectangular area, and selecting one of the trial divisions based upon resultant sizes of the groups.

The resultant sizes of the first and second groupings derived from the evaluation of the trial divisions are compared to a first range of sizes, and the records are into first and second groups based upon at least one of the groups corresponding to the first range of sizes.

ADVANTAGE - Provides potential for enhancing speed and operation of navigation application functions that use geographic data on storage medium. Can up-date real-time traffic information via wireless communication to supplement database installed in vehicle.

Dwg.3/11

Title Terms: RECORD; STORAGE; METHOD; STORAGE; GEOGRAPHICAL; DATA; STORAGE; MEDIUM; SEPARATE; GEOGRAPHICAL; DATA; PARCEL; FILL; VALUE; DIVIDE; ARRANGE; ENABLE; ADDRESS; IDENTIFY

Derwent Class: P85; S02; T01; W06

International Patent Class (Main): G01C-021/20; G06F-017/00 ; G06F-017/30 ; G09B-029/10

International Patent Class (Additional): G01C-021/00; G06F-017/50 ; G06T-001/00; G08G-001/0968; G08G-001/0969

File Segment: EPI; EngPI

19/5/41 (Item 32 from file: 350)

DIALOG(R) File 350:Derwent WPIX

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010780098 \*\*Image available\*\*

WPI Acc No: 1996-277051/199628

XRPX Acc No: N96-233087

Vehicle location detection unit navigation system - collates existing link and guide route data to determine deviations from guided route

Patent Assignee: ALPINE ELECTRONICS INC (ALPN )

Inventor: ICHIKAWA S

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 5523765	A	19960604	US 94255617	A	19940609	199628 B

Priority Applications (No Type Date): JP 93138250 A 19930610

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
US 5523765	A	29	G01S-003/02		

Abstract (Basic): US 5523765 A

A existing link comprises a road **segment** on which the vehicle is currently located. Positioning signals are received at the vehicle, for determining vehicle position, vehicle azimuth, and vehicle velocity. For each determination of the vehicle position, azimuth and velocity all the links within a predetermined distance of the vehicle position are extracted by looking up road data.

For each of the extracted links, information representing a relation between the vehicle position and the extracted link based on the vehicle position, azimuth and velocity relative to a speed limit of the link are obtained. The obtained information is substituted into an existential probability evaluation function to calculate an existential probability. A link is determined with the largest existential probability to be the existing **link**. A **location** of the vehicle to be on the existing **link**.

USE - For detecting an existing link of a vehicle for vehicle navigation.

Dwg.1/20

Title Terms: VEHICLE; LOCATE; DETECT; UNIT; NAVIGATION; SYSTEM; COLLATE; EXIST; LINK; GUIDE; ROUTE; DATA; DETERMINE; DEVIATE; GUIDE; ROUTE

Derwent Class: S02; T01; W06; X22

International Patent Class (Main): G01S-003/02

International Patent Class (Additional): G01C-021/00; G01S-005/02; G06F-007/70

File Segment: EPI

19/5/42 (Item 33 from file: 350)

DIALOG(R)File 350:Derwent WPIX

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009909060 \*\*Image available\*\*

WPI Acc No: 1994-176766/199422

Related WPI Acc No: 1995-328567; 1996-000038; 1999-000025; 1999-346560; 1999-404386; 2001-489108; 2003-199612

XRPX Acc No: N94-139293

Tracking vehicle location for fleet manager or dispatcher - using integrated system to display raster map and vectorised display information corresp. to vehicle position

Patent Assignee: CHRONOS MOBILE INFORMATION SYSTEMS LTD (CHRO-N); MOBILE INFORMATION SYSTEMS (MOBI-N); MOBILE INFORMATION SYSTEMS INC (MOBI-N)

Inventor: PRABHAKARAN S; SHAH M C

Number of Countries: 002 Number of Patents: 004

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
AU 9333784	A	19940428	AU 9333784	A	19930225	199422 B
AU 657604	B	19950316	AU 9333784	A	19930225	199518
US 5428546	A	19950627	US 92961736	A	19921016	199531
US 5594650	A	19970114	US 92961736	A	19921016	199709

Priority Applications (No Type Date): US 92961736 A 19921016; US 95437772 A 19950509

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
AU 9333784	A		25	G08G-001/13	
AU 657604	B			G08G-001/13	Previous Publ. patent AU 9333784
US 5428546	A		12	G06F-165/00	
US 5594650	A		13	G06F-165/00	Cont of application US 92961736 Cont of patent US 5428546

Abstract (Basic): AU 9333784 A

The method of displaying a user locatable mark representative of a vehicle position, wherein the magnitude of at least two positions defines the vehicle position, comprises the steps of defining two axes corresp. to two positions in respective segments of a display. Data is extracted from a first database contg. digitised information representative of fist predetermined area. A graphical representation of the digitised information adjacent to the two axes is displayed to form a raster map of the first predetermined area.

Data from a second database is extracted. The second database contains mobile position data corresp. to the two positions. The user locatable mark is displayed in the first display segment. The mark is representative of the vehicle position during a set time period. Information from a third database is extracted. The third database contains vector information representative of the vehicle position in the first set area. Vector text information corresp. to two positions of the user locatable mark is displayed. The vector text information is displayed on the second segment of the display.

ADVANTAGE - Provides intelligent address information in format easily understood by dispatcher.

Dwg.6/6

Title Terms: TRACK; VEHICLE; LOCATE; FLEET; MANAGE; DISPATCH; INTEGRATE; SYSTEM; DISPLAY; RASTER; MAP; DISPLAY; INFORMATION; CORRESPOND; VEHICLE; POSITION

Derwent Class: S02; T07

International Patent Class (Main): G06F-165/00 ; G08G-001/13

File Segment: EPI

19/5/43 (Item 34 from file: 350)

DIALOG(R) File 350:Derwent WPIX

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008873430 \*\*Image available\*\*

WPI Acc No: 1992-000701/199201

XRPX Acc No: N92-000600

Road navigation system for vehicle - has controller with CRT route display and continuous position update

Patent Assignee: MAZDA MOTOR CORP (MAZD ); MAZDA KK (MAZD )

Inventor: KAKIHARA M; MNASAKI Y; SASAKI M; SHOJI F; MASAKI Y

Number of Countries: 004 Number of Patents: 005

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
DE 4118603	A	19911219	DE 4118603	A	19910606	199201 B
US 5274387	A	19931228	US 91710578	A	19910605	199401
			US 92923004	A	19920730	
KR 9408400	B1	19940914	KR 919201	A	19910604	199633
DE 4118603	C2	19970904	DE 4118603	A	19910606	199739
JP 3017772	B2	20000313	JP 90148137	A	19900606	200017

Priority Applications (No Type Date): JP 90148137 A 19900606

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
DE 4118603	A		23		
JP 3017772	B2		7	G01C-021/00	Previous Publ. patent JP 4040597
US 5274387	A		23	G01S-003/02	Cont of application US 91710578
DE 4118603	C2		24	G08G-001/0962	
KR 9408400	B1			G08G-001/123	

Abstract (Basic): DE 4118603 A

The navigational aid system has a CRT display (26) onto which is shown a route map of the stated region defined by the user. The user has optical inputs (27, 29) to define start and end points for a required journey.

The system is operated by a controller (1) that reacts to inputs generated by a number of switches. Route maps are provided in the form of data stored on CD discs. Instantaneous position is indicated by a cursor symbol and is based upon a direction (20) and distance sensor (21).

ADVANTAGE - Provides efficient vehicle navigation. (23pp  
Dwg.No.1/14

Title Terms: ROAD; NAVIGATION; SYSTEM; VEHICLE; CONTROL; CRT; ROUTE;  
DISPLAY; CONTINUOUS; POSITION; UPDATE

Derwent Class: P85; S02; T01; W06; X22

International Patent Class (Main): G01C-021/00; G01S-003/02; G08G-001/0962;  
G08G-001/123

International Patent Class (Additional): G01C-021/04; G06F-015/48 ;  
G06F-017/00 ; G06F-019/00 ; G08G-001/09; G08G-001/0969; G09B-029/10

File Segment: EPI; EngPI

19/5/44 (Item 35 from file: 350)

DIALOG(R) File 350: Derwent WPIX  
(c) 2004 Thomson Derwent. All rts. reserv.

008661516 \*\*Image available\*\*

WPI Acc No: 1991-165543/199123

XRPX Acc No: N91-126940

Aircraft autonomous landing system - employs navigational aid so that features of terrain are extracted from corrected image for comparison with stored flight-path

Patent Assignee: DORNIER LUFTFAHRT GMBH (DOSY ); NFS NAVIGATIONS & FLUGFUEHRUNGS SYSTEME (NFSN-N); DAIMLER-BENZ AEROSPACE AG (DAIM ); DEUT AEROSPACE AG (DAIM ); NFS NAVIGATIONS & FLUGFUEHRUNGS SYSTEME GMBH (NFSN-N)

Inventor: EIBERT M; KANNAMUELLER G; LUX P; KANNAMULLE G

Number of Countries: 006 Number of Patents: 008

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
EP 429952	A	19910605	EP 90121765	A	19901114	199123 B
DE 3939731	A	19910606	DE 3939731	A	19891201	199124
US 5136297	A	19920804	US 90621521	A	19901203	199234
DE 3939731	C	19921105	DE 3939731	A	19891201	199245
EP 429952	A3	19920916				199339
EP 429952	B1	19960306				199614
DE 59010174	G	19960411	DE 510174	A	19901114	199620
			EP 90121765	A	19901114	
ES 2084633	T3	19960516	EP 90121765	A	19901114	199627

Priority Applications (No Type Date): DE 3939731 A 19891201

Cited Patents: NoSR.Pub; DE 3110691; GB 2162014; US 3705955; US 4792904; EP 396861; EP 396867

Patent Details:

Patent No	Kind	Lan Pg	Main IPC	Filing Notes
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EP 429952	A			
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Designated States (Regional): DE ES FR GB IT

US 5136297	A	11	G06F-015/50	
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DE 3939731	C	4	B64D-045/04	
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EP 429952	B1	G	14	G01S-007/02
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Designated States (Regional): DE ES FR GB IT

DE 59010174	G		G01S-007/02	Based on patent EP 429952
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ES 2084633	T3		G01S-007/02	Based on patent EP 429952
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Abstract (Basic): EP 429952 A

The navigation equipment comprises an image sensor (SN) directed at the overflow terrain, a distortion corrector (BK), a segmentation unit (SG), a feature extractor (ME), and a comparator (MV) of extracted features with reference data from a memory (RSP). The segmentation (SG) is applied to e.g. buildings, woodlands, clumps and individual trees, dykes, roads, bridges and railway installations.

Such identifiable objects are sought and weighted within a flight region selected from maps, aerial photographs, satellite imagery or geographical data banks.

ADVANTAGE - Positional accuracy and safety of either fully automatic or pilot-in-loop landing are increased. (11pp Dwg.No.1/6)

Title Terms: AIRCRAFT; AUTONOMOUS; LANDING; SYSTEM; EMPLOY; NAVIGATION; AID ; SO; FEATURE; TERRAIN; EXTRACT; CORRECT; IMAGE; COMPARE; STORAGE; FLIGHT ; PATH

Derwent Class: Q25; S02; W06

International Patent Class (Main): B64D-045/04; G01S-007/02; G06F-015/50

International Patent Class (Additional): G01C-003/00; G01C-021/00;

G01C-021/04; G01S-013/86; G01S-013/91; G01S-017/88; G05D-001/06;

G05D-001/10

File Segment: EPI; EngPI

19/5/45 (Item 36 from file: 350)

DIALOG(R) File 350:Derwent WPIX

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008622117 \*\*Image available\*\*

WPI Acc No: 1991-126147/199118

XRPX Acc No: N91-097081

Service info. system e.g. for hotel booking or aircraft navigation - has map and service data storage devices accessed by computer controlled by selection device

Patent Assignee: MITSUBISHI DENKI KK (MITO )

Inventor: HIRASA Y; MATSUMOTO K; OHTA M; TOKUNAGA T; YANO H; YOSHIDA C

Number of Countries: 002 Number of Patents: 003

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
DE 4033829	A	19910425	DE 4033829	A	19901024	199118 B
US 5289572	A	19940222	US 90602684	A	19901024	199408
			US 9326201	A	19930226	
DE 4033829	C2	19941110	DE 4033829	A	19901024	199443

Priority Applications (No Type Date): JP 89277555 A 19891024

Patent Details:

Patent No	Kind	Lan Pg	Main IPC	Filing Notes
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US 5289572	A	8	G06F-013/00	Cont of application US 90602684
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DE 4033829	C2	8	G09B-029/10	
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**Abstract (Basic): DE 4033829 A**

The service information system contains map and service data storage devices, a display for selective data display, a selection device and a controller.

Special geographical regions, formed by sections of the map data, and special service data elements are selected. The controller reads the map and service data according to the selection device's signals and indicates the operational location on the displayed map section. The service data are also displayed.

**USE/ADVANTAGE** - System can be used without users requiring access to detailed service information. Can be used in conjunction with map of navigation system used in motor vehicle showing geographical location of hotels, airports, etc. (8pp Dwg.No.1/3)

**Title Terms:** SERVICE; SYSTEM; HOTEL; BOOKING; AIRCRAFT; NAVIGATION; MAP; SERVICE; DATA; STORAGE; DEVICE; ACCESS; COMPUTER; CONTROL; SELECT; DEVICE

Derwent Class: P85; S02; T01; T06; W06; X22

International Patent Class (Main): G06F-013/00 ; G09B-029/10

File Segment: EPI; EngPI

**19/5/46 (Item 37 from file: 350)**

DIALOG(R) File 350:Derwent WPIX

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007850616

WPI Acc No: 1989-115728/198916

XRPX Acc No: N89-088267

Route data recording for motor vehicle navigation system - using small data quantities, storing map and distance numbers and updating data as they change

Patent Assignee: PIONEER ELECTRONIC CORP (PIOE )

Inventor: HOSOI M

Number of Countries: 003 Number of Patents: 004

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
DE 3828725	A	19890413	DE 3828725	A	19880824	198916 B
FR 2621150	A	19890331				198920
US 4897792	A	19900130	US 88248094	A	19880923	199012
DE 3828725	C	19910321				199112

Priority Applications (No Type Date): JP 87245622 A 19870929; JP 87245620 A 19870929; JP 87245621 A 19870929

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
DE 3828725	A	22			
US 4897792	A		4		

**Abstract (Basic): DE 3828725 A**

When each street position on a map is stored in numeric form **index** numbers associated with a sequence of positions on each road, map numbers each associated with a map and distance numbers are stored.

During the journey the map and distance numbers are monitored and the instantaneous vehicle position identified.

A preceding map number, distance number and **index** number are stored when the current map number differs from the previous map number or the current distance number differs from the preceding distance number.

**ADVANTAGE** - Method enables exact storage of route using only small quantity of data compared to conventional methods

**Title Terms:** ROUTE; DATA; RECORD; MOTOR; VEHICLE; NAVIGATION; SYSTEM; DATA;

QUANTITY; STORAGE; MAP; DISTANCE; NUMBER; UPDATE; DATA; CHANGE  
Derwent Class: P85; S02; T05; W06; X22  
International Patent Class (Additional): G01C-021/14; G06F-015/50 ;  
G07B-029/10; G07C-005/08; G09B-029/10  
File Segment: EPI; EngPI

International Patent Class (Additional): G01C-021/24; G08G-001/0969;  
G09B-029/10  
File Segment: EPI; EngPI

19/5/29 (Item 20 from file: 350)

DIALOG(R) File 350:Derwent WPIX  
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013373216 \*\*Image available\*\*  
WPI Acc No: 2000-545154/200050  
XRPX Acc No: N00-403308

Navigation system gives combination of walking and driving information

Patent Assignee: NAVIGATION TECHNOLOGIES CORP (NAVI-N); BECHTOLSHEIM S V (BECH-I); CASINO R (CASCI-I); DODDAPANENI S (DODD-I); FRIEDERICH M (FRIE-I); JAUGILAS J M (JAUG-I); KALISETTY S (KALI-I); WEILAND R J (WEIL-I)

Inventor: BECHTOLSHEIM S V; CASINO R; DODDAPANENI S; FRIEDRICH M; JAUGILAS J M ; KASILETTY S; WEILAND R J; FRIEDERICH M; KALISETTY S

Number of Countries: 027 Number of Patents: 005

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
EP 1030167	A1	20000823	EP 99310376	A	19991221	200050	B
JP 2000213946	A	20000804	JP 20009652	A	20000119	200051	
US 6208934	B1	20010327	US 99234154	A	19990119	200119	
US 20010025222	A1	20010927	US 99234154	A	19990119	200159	
			US 2001814447	A	20010322		
US 6374182	B1	20020416	US 99234154	A	19990119	200232	
			US 2001814447	A	20010322		

Priority Applications (No Type Date): US 99234154 A 19990119; US 2001814447 A 20010322

Patent Details:

Patent No Kind Lan Pg Main IPC Filing Notes

EP 1030167 A1 E 30 G01C-021/34

Designated States (Regional): AL AT BE CH CY DE DK ES FI FR GB GR IE IT  
LI LT LU LV MC MK NL PT RO SE SI

JP 2000213946 A 23 G01C-021/00

US 6208934 B1 G06F-165/00

US 20010025222 A1 G01C-021/34 Cont of application US 99234154

Cont of patent US 6208934

US 6374182 B1 G01C-021/30 Cont of application US 99234154

Cont of patent US 6208934

Abstract (Basic): EP 1030167 A1

NOVELTY - A first route is calculated for driving towards the destination with the computer based system using a geographic database including data for segments of roads in a given area. A second route is calculated for reaching the destination by foot, which is provided to the end user.

DETAILED DESCRIPTION - An INDEPENDENT CLAIM is included for a navigation system installed in a vehicle.

USE - For navigation.

ADVANTAGE - Combines information about walking to a destination with information about driving to or close to the destination.

DESCRIPTION OF DRAWING(S) - The drawing shows a block diagram of the navigation system .

pp; 30 DwgNo 1/11

Title Terms: NAVIGATION; SYSTEM; COMBINATION; WALKING; DRIVE; INFORMATION

Derwent Class: P85; S02; T01; T07; W06; X22  
International Patent Class (Main): G01C-021/00; G01C-021/30; G01C-021/34;  
**G06F-165/00**  
International Patent Class (Additional): G01C-021/32; G08G-001/0969;  
G09B-029/10  
File Segment: EPI; EngPI

19/5/30 (Item 21 from file: 350)  
DIALOG(R) File 350:Derwent WPIX  
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013217299 \*\*Image available\*\*  
WPI Acc No: 2000-389173/200034  
XRXPX Acc No: N00-291420

Road condition radio transmissions for on-board navigation systems  
has transmitted data related to route for guidance  
Patent Assignee: NAVIGATION TECHNOLOGIES CORP (NAVI-N); ASHBY R A (ASHB-I);  
FERNEKES R (FERN-I); ISRANI V S (ISRA-I); JAUGILAS J M (JAUG-I); LAMPERT  
D (LAMP-I)

Inventor: ASHBY R A; FERNEKES R; ISRANI V S; JAUGILAS J M ; LAMPERT D  
Number of Countries: 027 Number of Patents: 004

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
EP 1004852	A2	20000531	EP 99306761	A	19990825	200034 B
JP 2000221046	A	20000811	JP 98378104	A	19981218	200044
US 6438561	B1	20020820	US 98196409	A	19981119	200257
US 20020194170	A1	20021219	US 98196409	A	19981119	200303
			US 2002196476	A	20020716	

Priority Applications (No Type Date): US 98196409 A 19981119; US 2002196476  
A 20020716

Patent Details:

Patent No	Kind	Lan Pg	Main IPC	Filing Notes
EP 1004852	A2	E	34 G01C-021/34	
Designated States (Regional): AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI				
JP 2000221046	A	94	G01C-021/00	
US 6438561	B1		G06F-017/30	
US 20020194170	A1		G06F-007/00	Cont of application US 98196409 Cont of patent US 6438561

Abstract (Basic): EP 1004852 A2

NOVELTY - Vehicle (11) has on-board **navigation system**, which typically includes device (124) for identifying vehicle location and system (112) for developing route guidance based on position and map data (143).

Vehicle also receives (125) data transmitted from a traffic broadcast system, which includes identification of location and traffic condition. The on-board system relates transmitted location with its own reference data to use it in guidance

USE - Updating vehicle guidance data by traffic condition broadcasts.

ADVANTAGE - Allows available transmission data to be utilized without requiring driver action or attention to broadcasts

DESCRIPTION OF DRAWING(S) - Figure is block diagram illustrating components of

traffic broadcast **system** and one of vehicles with on-board **navigation system**.

Vehicle with on-board **navigation system** (11)

Broadcasts of traffic conditions (20)  
pp; 34 DwgNo 2/17

Title Terms: ROAD; CONDITION; RADIO; TRANSMISSION; BOARD; NAVIGATION;  
SYSTEM; TRANSMIT; DATA; RELATED; ROUTE; GUIDE

Derwent Class: P85; S02; T01; T07; W06; X22

International Patent Class (Main): G01C-021/00; G01C-021/34; G06F-007/00 ;  
G06F-017/30

International Patent Class (Additional): G08G-001/09; G08G-001/0968;  
G08G-001/0969; G09B-029/00; G09B-029/10

File Segment: EPI; EngPI

19/5/31 (Item 22 from file: 350)

DIALOG(R) File 350:Derwent WPIX

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013217255 \*\*Image available\*\*

WPI Acc No: 2000-389129/200034

XRPX Acc No: N00-291380

Route guidance information providing method, for navigation  
application program by forming maneuver data structures that include  
data from geographic database for each location

Patent Assignee: NAVIGATION TECHNOLOGIES CORP (NAVI-N)

Inventor: FOWLER A; MITTAL A

Number of Countries: 027 Number of Patents: 003

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
EP 1003016	A2	20000524	EP 99306753	A	19990825	200034	B
JP 2000221041	A	20000811	JP 98378103	A	19981218	200044	
US 6212474	B1	20010403	US 98196279	A	19981119	200120	

Priority Applications (No Type Date): US 98196279 A 19981119

Patent Details:

Patent No Kind Lan Pg Main IPC Filing Notes

EP 1003016 A2 E 56 G01C-021/26

Designated States (Regional): AL AT BE CH CY DE DK ES FI FR GB GR IE IT  
LI LT LU LV MC MK NL PT RO SE SI

JP 2000221041 A 132 G01C-021/00

US 6212474 B1 G01C-021/34

Abstract (Basic): EP 1003016 A2

NOVELTY - Maneuver data structures are used to form list of tokens  
which can be either character string or symbol that refers to another  
item of data, such as audio or graphics data. List of tokens is built  
by combining sequences of tokens for each maneuver data structure,  
using respective output list formed by applying rules set to the data  
in the maneuver data structure, and forming index to associate the  
tokens with data used in maneuvering instructions.

DETAILED DESCRIPTION - AN INDEPENDENT CLAIM is made for a route  
guidance program storable on a computer readable medium.

USE - For providing route guidance information to an end user of  
navigation application program , applicable in personal navigation  
systems .

ADVANTAGE - Facilitates delivery of meaningful information to end  
user of navigation application program . that can be readily used  
in a variety of different software and hardware environments.

DESCRIPTION OF DRAWING(S) - Drawing shows block diagram of  
illustration of navigation system .

pp; 56 DwgNo 1/11

Title Terms: ROUTE; GUIDE; INFORMATION; METHOD; NAVIGATION; APPLY; PROGRAM;

FORMING; DATA; STRUCTURE; DATA; GEOGRAPHICAL; DATABASE; LOCATE  
Derwent Class: S02; T01; X22  
International Patent Class (Main): G01C-021/00; G01C-021/26; G01C-021/34  
International Patent Class (Additional): G01C-021/36; G06F-017/30 ;  
G08G-001/0969  
File Segment: EPI

19/5/32 (Item 23 from file: 350)

DIALOG(R) File 350:Derwent WPIX  
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013112927 \*\*Image available\*\*

WPI Acc No: 2000-284798/200025

XRPX Acc No: N00-214439

**Data compression method for compressing geographic data by substituting substring of data characters located at first position in stream of data characters with substitution code**

Patent Assignee: NAVIGATION TECHNOLOGIES CORP (NAVI-N); FRIEDERICH M (FRIE-I); MEEK J A (MEEK-I)

Inventor: FRIEDERICH M; MEEK J A

Number of Countries: 027 Number of Patents: 006

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
EP 987823	A2	20000322	EP 99306714	A	19990824	200025 B
JP 2000101441	A	20000407	JP 98377973	A	19981216	200028
US 20010043745	A1	20011122	US 98153996	A	19980917	200176
US 6393149	B1	20020521	US 98153996	A	19980917	200239
US 6600841	B1	20030729	US 98153996	A	19980917	200354
			US 2002104947	A	20020322	
US 20030210825	A1	20031113	US 98153996	A	19980917	200382
			US 2002104947	A	20020322	
			US 2003464717	A	20030617	

Priority Applications (No Type Date): US 98153996 A 19980917; US 2002104947 A 20020322; US 2003464717 A 20030617

Patent Details:

Patent No Kind Lan Pg Main IPC Filing Notes

EP 987823 A2 E 37 H03M-007/30

Designated States (Regional): AL AT BE CH CY DE DK ES FI FR GB GR IE IT  
LI LT LU LV MC MK NL PT RO SE SI

JP 2000101441 A 99 H03M-007/30

US 20010043745 A1 G06K-009/36

US 6393149 B1 G06K-009/34

US 6600841 B1 G06K-009/54 Div ex application US 98153996

Div ex patent US 6393149

US 20030210825 A1 G06K-009/36 Div ex application US 98153996

Div ex application US 2002104947

Div ex patent US 6393149

Div ex patent US 6600841

Abstract (Basic): EP 987823 A2

NOVELTY - The method entails searching preceding portion of input stream of data characters from a first position for a sequence of data characters that match a sequence of data characters at the first position. Matching sequence found is replaced with reference to matching sequence of data characters in preceding portion of input stream.

DETAILED DESCRIPTION - The reference comprises backwards offset from first position to the position in the preceding portion of the input stream at which the matching sequence of data characters is

located. The preceding portion is defined by a fixed number of characters relative to the first position.

USE - For storing geographic database or portions of the database in compressed form or for transmitting database via wireless transmission from a central server to a vehicle.

ADVANTAGE - Applicable by navigation system, and geographic data base may be organized other than in parcels. Compression technique can also be used with other kinds of data, particularly data arranged in manner facilitating use of data by specific applications, such as in digital encyclopaedias, digital catalogues and digital archives, etc. Huffman trees can be used for each data in the geographic database.

DESCRIPTION OF DRAWING(S) - Drawing is block diagram illustrating a navigation system.

pp; 37 DwgNo 1/11

Title Terms: DATA; COMPRESS; METHOD; COMPRESS; GEOGRAPHICAL; DATA; SUBSTITUTE; DATA; CHARACTER; LOCATE; FIRST; POSITION; STREAM; DATA; CHARACTER; SUBSTITUTE; CODE

Derwent Class: U21; W06

International Patent Class (Main): G06K-009/34; G06K-009/36; G06K-009/54;  
H03M-007/30

International Patent Class (Additional): G01C-021/00; G01C-021/26;  
G06F-007/00 ; G06F-017/30 ; G06K-009/46

File Segment: EPI

19/5/33 (Item 24 from file: 350)

DIALOG(R) File 350:Derwent WPIX

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013106125 \*\*Image available\*\*

WPI Acc No: 2000-277996/200024

XRPX Acc No: N00-209339

Image data reading controller for radio terminal equipment used for image communication in navigation system

Patent Assignee: MATSUSHITA DENKI SANGYO KK (MATU )

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
JP 2000076126	A	20000314	JP 98263925	A	1998090	200024 B

Priority Applications (No Type Date): JP 98263925 A 19980903

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
JP 2000076126	A	29		G06F-012/02	

Abstract (Basic): JP 2000076126 A

NOVELTY - A ring buffer management unit (12) regulates the inputting of read image data into a ring buffer according to an address range which extends from a start address to an end address. A supplement area management unit (14) controls the ring buffer's area which is to be filled up, based on a standard address in the ring buffer. DETAILED DESCRIPTION - An image data management unit (11) controls the read out of image data from the rectangular area of a memory space. An INDEPENDENT CLAIM is also included for an image data reading control procedure.

USE - For transferring image data from a memory space into a ring buffer in radio terminal equipment used for image communication in navigation system .

ADVANTAGE - Enables division of memory space into variable areas

without increasing the memory space capacity. Enables controlling the supplement of image data based on the direction of variation of rectangular area within the ring buffer. DESCRIPTION OF DRAWING(S) - The figure shows the block diagram of image data reading controller. (11) Image data management unit; (12) Ring buffer management unit; (14) Supplement area management unit.

Dwg.1/19

Title Terms: IMAGE; DATA; READ; CONTROL; RADIO; TERMINAL; EQUIPMENT; IMAGE; COMMUNICATE; NAVIGATION; SYSTEM

Derwent Class: T01

International Patent Class (Main): G06F-012/02

International Patent Class (Additional): G06T-001/60

File Segment: EPI

19/5/34 (Item 25 from file: 350)

DIALOG(R) File 350:Derwent WPIX

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012899201 \*\*Image available\*\*

WPI Acc No: 2000-071036/200006

XRPX Acc No: N00-055455

**Digital system for assisting navigation using rendered terrain imaging**

Patent Assignee: SMITH E L (SMIT-I); ZIMMERMAN K (ZIMM-I)

Inventor: SMITH E L; ZIMMERMAN K

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 5995903	A	19991130	US 96745827	A	19961112	200006 B

Priority Applications (No Type Date): US 96745827 A 19961112

Patent Details:

Patent No	Kind	Lan Pg	Main IPC	Filing Notes
US 5995903	A	10	G06F-165/00	

Abstract (Basic): US 5995903 A

NOVELTY - An image generation processing block (24) generates 3D virtual image, to compute heading, pitch and directional vector of current position of vehicle, based on which most recent spatial location of vehicle in localized terrain computed by location calculation block (16).

DETAILED DESCRIPTION - A positional information block (14) receives positional input **data** from GPS unit (12). A **location** calculation block (16) which receives input data from positional information block (14), generates most recent **spatial** location of vehicle in localized terrain over which vehicle travels. A terrain database block (18) contains data of localized terrain over which vehicle travels. The image generation processing block incorporates weather conditions from weather radar system terrain database block and positional information block to generate 3D virtual image. An INDEPENDENT CLAIM is also included for method for generating 3D virtual image representation of localized terrain.

USE - In vehicle for assisting navigation using rendered terrain imaging.

ADVANTAGE - Renders a depiction of terrain outside vehicle as seen in high visibility conditions, regardless of weather lighting and atmospheric conditions. Enables operation to view terrain in vehicle's directional vector of travel in spite of restricted visibility conditions such as smoke, ice, snow, rain, blizzards, nighttime.

DESCRIPTION OF DRAWING(S) - The figure shows the block diagram of digital computer system.

GPS unit (12)  
Positional information block (14)  
Location calculation block (16)  
Terrain database block (18)  
Image generation processing block (24)  
pp; 10 DwgNo 1/6

Title Terms: DIGITAL; SYSTEM; ASSIST; NAVIGATION; RENDER; TERRAIN; IMAGE  
Derwent Class: S02; T01; W06

International Patent Class (Main): G06F-165/00

International Patent Class (Additional): G01C-021/00; G08G-001/137

File Segment: EPI

19/5/35 (Item 26 from file: 350)

DIALOG(R) File 350:Derwent WPIX  
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012775947 \*\*Image available\*\*  
WPI Acc No: 1999-582173/199950

XRPX Acc No: N99-430026

**Memory management for navigation system**

Patent Assignee: NAVIGATION TECHNOLOGIES CORP (NAVI-N)

Inventor: CROWLEY P; JAUGILAS J ; LAMPERT D S; NASH A; NATESAN S

Number of Countries: 027 Number of Patents: 003

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
EP 945706	A2	19990929	EP 99302263	A	19990324	199950	B
JP 11327979	A	19991130	JP 98377975	A	19981216	200007	
US 6073076	A	20000606	US 9849747	A	19980327	200033	

Priority Applications (No Type Date): US 9849747 A 19980327

Patent Details:

Patent No	Kind	Lan Pg	Main IPC	Filing Notes
EP 945706	A2	E	26	G01C-021/20

Designated States (Regional): AL AT BE CH CY DE DK ES FI FR GB GR IE IT  
LI LT LU LV MC MK NL PT RO SE SI  
JP 11327979 A 72 G06F-012/00  
US 6073076 A G06F-017/30

Abstract (Basic): EP 945706 A2

NOVELTY - **Geographic data** used in the system consist of a number of data records which are organized into **parcels**. The data records in each **parcel** portion are accessed together. Buffers form a contiguous portion of the **navigation system** memory constituting a cache storing the **parcels**. Data structures located outside the contiguous portion of memory identifies parcels of data stored.

DETAILED DESCRIPTION - The **navigation system** (10) is a combination of hardware and **software** components. It consists of the processor (12), a drive (14) connected to the processor (12) and nonvolatile memory storage device (16) for storing **navigation application software program** (18). Processor (12) may be any 32-bit type using a flat address **space**. The **navigation system** (10) may also incorporate a positioning unit (24) employing a GPS technology or dead reckoning.

USE - In **navigation systems** relying on geographic data base.

ADVANTAGE - Its functionality is improved.

DESCRIPTION OF DRAWING(S) - The figure shows a block diagram illustrating a **navigation system**.

**navigation system** (10)

processor (12)

drive (14)  
non volatile memory storage device (16)  
software program (18)  
positioning unit (24)  
pp; 26 DwgNo 1/14

Title Terms: MEMORY; MANAGEMENT; NAVIGATION; SYSTEM

Derwent Class: P85; S02; T01

International Patent Class (Main): G01C-021/20; G06F-012/00 ; G06F-017/30

International Patent Class (Additional): G01C-021/00; G06F-012/08 ;  
G09B-029/00; G09B-029/10

File Segment: EPI; EngPI

19/5/36 (Item 27 from file: 350)

DIALOG(R) File 350:Derwent WPIX  
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012736476 \*\*Image available\*\*

WPI Acc No: 1999-542593/199946

Related WPI Acc No: 1999-542592

XRPX Acc No: N99-402393

**Geographic data base for navigational applications**

Patent Assignee: NAVIGATION TECHNOLOGIES CORP (NAVI-N)

Inventor: ASHBY R A; BOUZIDE P M; DODDAPANENI S; FERNEKES R P; FRIEDERICH M ; ISRANI V S; JASPER J C; KAVAKH A; MCDONOUGH W; MEEK J A; NATESAN S K; SMITH N E; LIVSHUTZ M

Number of Countries: 027 Number of Patents: 005

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
EP 943895	A2	19990922	EP 99301931	A	19990312	199946 B
JP 11345247	A	19991214	JP 98377974	A	19981216	200009
US 6038559	A	20000314	US 9839583	A	19980316	200020
US 6473770	B1	20021029	US 9839583	A	19980316	200274
			US 9839586	A	19980316	
			US 99467276	A	19991220	
			US 200144580	A	20011023	
US 6507850	B1	20030114	US 9839583	A	19980316	200313
			US 9839586	A	19980316	
			US 99467276	A	19991220	

Priority Applications (No Type Date): US 9839583 A 19980316; US 9839586 A 19980316; US 99467276 A 19991220; US 200144580 A 20011023

Patent Details:

Patent No Kind Lan Pg Main IPC Filing Notes

EP 943895 A2 E 39 G01C-021/20

Designated States (Regional): AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI

JP 11345247 A 105 G06F-017/30

US 6038559 A G06F-017/30

US 6473770 B1 G06F-017/30

Cont of application US 9839583  
Cont of application US 9839586  
Div ex application US 99467276  
Cont of patent US 6038559  
Cont of patent US 6112200  
Cont of application US 9839583  
Cont of application US 9839586  
Cont of patent US 6038559  
Cont of patent US 6112200

Abstract (Basic): EP 943895 A2

**NOVELTY** - Each data entry, representing a segment of a road, is associated with another data entry to form an aggregation of the two pieces of information.

**DETAILED DESCRIPTION** - Navigation system (10) is a combination of hardware and software components. It includes a processor (12), a drive (14) connected to the processor (120) and a nonvolatile memory storage device (16) for storing a **navigation application software program** (18). The processor used (12) is typically a 32-bit processor using a flat address **space**. The **navigation system** may also include a positioning device (24) utilizing GPS technology, a dead reckoning type system or a combination of these. The positioning system (24) includes suitable sensing devices (25) measuring the traveling distance, speed, direction and so on. The positioning system (24) outputs a signal (26) to the processor (12). The signal (26) is used by the navigation application software (18) that is run on the processor (12).

**USE** - Data base is used in navigation systems.

**ADVANTAGE** - Navigation system performance is improved.

**DESCRIPTION OF DRAWING(S)** - The figure is a block diagram illustrating the operation of the navigation system.

pp; 39 DwgNo 1/23

Title Terms: GEOGRAPHICAL; DATA; BASE; NAVIGATION; APPLY

Derwent Class: P85; S02; T01; W06

International Patent Class (Main): G01C-021/20; **G06F-017/30**

International Patent Class (Additional): G01C-021/00; G06T-001/00;

G08G-001/0969; G09B-029/00

File Segment: EPI; EngPI

19/5/37 (Item 28 from file: 350)

DIALOG(R) File 350:Derwent WPIX

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012736475 \*\*Image available\*\*

WPI Acc No: 1999-542592/199946 .

Related WPI Acc No: 1999-542593

XRPX Acc No: N99-402392

**Geographic data base interleaving of data types for navigational applications**

Patent Assignee: NAVIGATION TECHNOLOGIES CORP (NAVI-N)

Inventor: ASHBY R A; ISRANI V S; LIVSHUTZ M

Number of Countries: 027 Number of Patents: 003

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
EP 943894	A2	19990922	EP 99301925	A	19990312	199946 B
JP 11327435	A	19991126	JP 98378102	A	19981218	200007
US 6112200	A	20000829	US 9839586	A	19980316	200043

Priority Applications (No Type Date): US 9839586 A 19980316

Patent Details:

Patent No	Kind	Lan Pg	Main IPC	Filing Notes
EP 943894	A2	E	35 G01C-021/20	

Designated States (Regional): AL AT BE CH CY DE DK ES FI FR GB GR IE IT  
LI LT LU LV MC MK NL PT RO SE SI

JP 11327435 A 93 G09B-029/00

US 6112200 A G06F-017/30

Abstract (Basic): EP 943894 A2

**NOVELTY** - Geographic data base consists of a number of records of the first and second type. Records of both types are organized into a number of parcels and interleaved. The interleaving process enables the

select the alternative names in different languages for the geographical features represented by the data records in the parcels that are valid in a selected language.

DETAILED DESCRIPTION - An INDEPENDENT CLAIM is also included for navigation system .

USE - Computer usable medium for computer-based navigation system (claimed) such as the global positioning system for motor vehicles.

ADVANTAGE - Accommodates and supports alternative names for locations in a geographical region by providing internal language filters for selecting alternative names of geographical features. Facilitates efficient usage of navigation system resources and maintains desired navigation system performance characteristics.

DESCRIPTION OF DRAWING(S) - The figure shows an external index of the selected parcel.

pp; 18 DwgNo 11/13

Title Terms: COMPUTER; MEDIUM; NAVIGATION; SYSTEM; INTERNAL; LANGUAGE; FILTER; SELECT; ALTERNATIVE; NAME; LANGUAGE; GEOGRAPHICAL; FEATURE; REPRESENT; DATA; RECORD

Derwent Class: S02; T01; W06; X22

International Patent Class (Main): G06F-017/30

File Segment: EPI

19/5/21 (Item 12 from file: 350)

DIALOG(R) File 350:Derwent WPIX

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014360321 \*\*Image available\*\*

WPI Acc No: 2002-181022/200224

XRPX Acc No: N02-137626

Geographic map data storage method in navigation system , involves separating map data into parcels such that map data portion corresponding to rectangular area does not exceed predetermined size

Patent Assignee: NAVIGATION TECHNOLOGIES CORP (NAVI-N); WHITE K (WHIT-I)

Inventor: WHITE K

Number of Countries: 028 Number of Patents: 004

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
EP 1176394	A2	20020130	EP 2001305650	A	20010629	200224 B
JP 2002116690	A	20020419	JP 2001226267	A	20010726	200243
US 6591270	B1	20030708	US 2000629224	A	20000728	200353
US 20030200228	A1	20031023	US 2000629224	A	20000728	200370
			US 2003448674	A	20030530	

Priority Applications (No Type Date): US 2000629224 A 20000728; US 2003448674 A 20030530

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
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EP 1176394	A2	E	11	G01C-021/32	
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Designated States (Regional): AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI TR

JP 2002116690	A	9	G09B-029/00
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US 6591270	B1		G06F-017/30
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US 20030200228	A1		G06F-007/00	Cont of application US 2000629224
				Cont of patent US 6591270

Abstract (Basic): EP 1176394 A2

NOVELTY - The map data of each intermediate collection are separated into parcels . Each of the parcel contains a portion of

the map data that represents the geographic features located in the corresponding rectangular area. The size of each rectangular area corresponds to different dimensions in different co-ordinate directions such that the map data portion does not exceed a predetermined maximum parcel size.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:

- (a) Geographic map database;
- (b) Navigation system for organizing map data

USE - For storing geographic map data in storage medium e.g. CD-ROM, DVD-ROM, hard disk, etc., for navigation system (claimed).

ADVANTAGE - The map data are organized and stored efficiently.

DESCRIPTION OF DRAWING(S) - The figure shows the numbering and ordering the parcels of map data.

pp; 11 DwgNo 3/4

Title Terms: GEOGRAPHICAL; MAP; DATA; STORAGE; METHOD; NAVIGATION; SYSTEM; SEPARATE; MAP; DATA; PARCEL; MAP; DATA; PORTION; CORRESPOND; RECTANGLE; AREA; PREDETERMINED; SIZE

Derwent Class: P85; S02; T01

International Patent Class (Main): G01C-021/32; G06F-007/00 ; G06F-017/30 ; G09B-029/00

International Patent Class (Additional): G01C-021/00; G06T-001/00; G06T-011/60; G08G-001/0969

File Segment: EPI; EngPI

19/5/22 (Item 13 from file: 350)

DIALOG(R) File 350:Derwent WPIX

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014287026 \*\*Image available\*\*

WPI Acc No: 2002-107727/200215

XRPX Acc No: N02-080205

Database architecture for in-vehicle navigation system has a deductive database engine, which combines logic rules to determine which geographic data to display based on user requests

Patent Assignee: NAVIGATION TECHNOLOGIES CORP (NAVI-N)

Inventor: ROBARE P

Number of Countries: 028 Number of Patents: 003

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
EP 1139066	A2	20011004	EP 2001301802	A	20010228	200215	B
JP 2001331493	A	20011130	JP 200183456	A	20010322	200215	
US 6601073	B1	20030729	US 2000532617	A	20000322	200354	

Priority Applications (No Type Date): US 2000532617 A 20000322

Patent Details:

Patent No Kind Lan Pg Main IPC Filing Notes

EP 1139066 A2 E 27 G01C-021/32

Designated States (Regional): AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI TR

JP 2001331493 A 25 G06F-017/30

US 6601073 B1 G06F-017/30

Abstract (Basic): EP 1139066 A2

NOVELTY - Geographic data (40) is stored and multiply indexed (66) on a medium (32) such as CD-ROM, DVD, hard drive or PCMCIA card. A data access layer (39) accepts user requests from navigation program applications (28) for geographically referenced data . The data access layer has a deductive database engine that combines logic rules

to determine which **geographic data** to access and display.

**DETAILED DESCRIPTION** - An INDEPENDENT CLAIM is also included for a method of operation for accessing a geographic database.

**USE** - For an in-vehicle **navigation system**.

**ADVANTAGE** - Deductive database engine can be used on different hardware platforms. The logic rule retrieval technique means that only relevant data is displayed. New data types or tables can be included in the database by providing new logic rules that refer to the new data type or table.

**DESCRIPTION OF DRAWING(S)** - The figure shows a block diagram illustrating parts of the **navigation system**.

**Navigation program applications** (28)

Storage medium (32)

Data access layer (39)

**Geographic data** (40)

**Indexes** (66)

pp; 27 DwgNo 1/12

Title Terms: DATABASE; ARCHITECTURE; VEHICLE; NAVIGATION; SYSTEM; DATABASE; ENGINE; COMBINATION; LOGIC; RULE; DETERMINE; GEOGRAPHICAL; DATA; DISPLAY; BASED; USER; REQUEST

Derwent Class: S02; T01; X22

International Patent Class (Main): G01C-021/32; **G06F-017/30**

International Patent Class (Additional): G01C-021/00; G06T-017/50; G08G-001/0969; G08G-001/123; G09B-029/00

File Segment: EPI

19/5/23 (Item 14 from file: 350)

DIALOG(R) File 350: Derwent WPIX

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014222530 \*\*Image available\*\*

WPI Acc No: 2002-043228/200206

XRPX Acc No: N02-032109

Geographic data provision method for navigation system, involves accessing sub-data blocks as groups with size not exceeding set block storage size

Patent Assignee: NAVIGATION TECHNOLOGIES CORP (NAVI-N)

Inventor: ASHBY R A

Number of Countries: 027 Number of Patents: 002

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
EP 1158428	A2	20011128	EP 2001303655	A	20010420	200206 B
JP 2002091989	A	20020329	JP 2001146575	A	20010516	200238

Priority Applications (No Type Date): US 2000576779 A 20000523

Patent Details:

Patent No	Kind	Lan Pg	Main IPC	Filing Notes
EP 1158428	A2	E	18	G06F-017/30

Designated States (Regional): AL AT BE CH CY DE DK ES FI FR GB GR IE IT  
LI LT LU LV MC MK NL PT RO SE SI TR  
JP 2002091989 A 15 G06F-017/30

Abstract (Basic): EP 1158428 A2

NOVELTY - The input **geographic data** spatially organized into blocks with predetermined storage size, is provided for use on multiple computing platforms. A software program is executed for selecting a sub-data block size larger than the predetermined size. The sub-data blocks are accessed together as groups with size not exceeding the block size.

**DETAILED DESCRIPTION** - An INDEPENDENT CLAIM is also included for computing platform operation method.

**USE** - For providing geographic data in navigation system.

**ADVANTAGE** - Enhances the performance of the navigation system by enlarging amount of data read from memory in single input/output operation.

**DESCRIPTION OF DRAWING(S)** - The figure shows the spatial data divided into four blocks not greater than 128K bytes in size.

pp; 18 DwgNo 1/7

Title Terms: GEOGRAPHICAL; DATA; PROVISION; METHOD; NAVIGATION; SYSTEM;

ACCESS; SUB; DATA; BLOCK; GROUP; SIZE; SET; BLOCK; STORAGE; SIZE

Derwent Class: P85; S02; T01

International Patent Class (Main): G06F-017/30

International Patent Class (Additional): G01C-021/00; G08G-001/137;  
G09B-029/00

File Segment: EPI; EngPI

19/5/24 (Item 15 from file: 350)

DIALOG(R) File 350:Derwent WPIX

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014086577

WPI Acc No: 2001-570791/200164

XRPX Acc No: N01-425360

Internet navigation system and method comprises interconnected links of listed words, areas of interest characterized by links of geographical images representing specific/general territorial realities

Patent Assignee: LAGEMANN C H (LAGE-I)

Inventor: LAGEMANN C H

Number of Countries: 094 Number of Patents: 003

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
WO 200167200	A2	20010913	WO 2001IB339	A	20010308	200164 B
AU 200139464	A	20010917	AU 200139464	A	20010308	200204
BR 200000672	A	20020102	BR 2000672	A	20000308	200206

Priority Applications (No Type Date): BR 2000672 A 20000308

Patent Details:

Patent No Kind Lan Pg Main IPC Filing Notes

WO 200167200 A2 E 7 G06F-000/00

Designated States (National): AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW

Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZW

AU 200139464 A G06F-000/00 Based on patent WO 200167200

BR 200000672 A G06F-017/30

Abstract (Basic): WO 200167200 A2

NOVELTY - The navigation system comprises of interconnected links of words organized in groups / areas of interest associated with links to graphical images representing specific/general territorial realities e.g. global, regional map data. The areas identified by image or linguistic links identify senders location and any keyword description found suitable. The map image data is chosen by graphical user interface with linguistic links selected from free space inset.

DETAILED DESCRIPTION - An INDEPENDENT CLAIM is included for the

method used by the system for Internet navigation purposes.

USE - Used to provide an Internet navigation system identifying the users geographical location by map image and associated linguistic links

ADVANTAGE - Provides a method avoiding the inconvenience of difficult navigation and location of desired data due to varying idioms, language, style and symbols of different countries restricting users to certain sites and information records

pp; 7 DwgNo 0/0

Title Terms: NAVIGATION; SYSTEM; METHOD; COMPRISE; INTERCONNECT; LINK; LIST ; WORD; AREA; INTEREST; LINK; GEOGRAPHICAL; IMAGE; REPRESENT; SPECIFIC; GENERAL

Derwent Class: T01

International Patent Class (Main): G06F-000/00 ; G06F-017/30

File Segment: EPI

19/5/25 (Item 16 from file: 350)

DIALOG(R) File 350:Derwent WPIX

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014055976 \*\*Image available\*\*

WPI Acc No: 2001-540189/200160

Related WPI Acc No: 2002-236282

XRPX Acc No: N01-401368

Navigation system used in vehicles, has error report programming with routine that collects data indicating error and sends report including data indicating error, in response to error indication by user

Patent Assignee: NAVIGATION TECHNOLOGIES CORP (NAVI-N)

Inventor: BARTON M; CASINO R; KAPLAN L M; OHLER J

Number of Countries: 028 Number of Patents: 003

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
US 6253151	B1	20010626	US 2000602127	A	20000623	200160	B
EP 1167924	A2	20020102	EP 2001304778	A	20010531	200209	
JP 2002221422	A	20020809	JP 2001228707	A	20010622	200267	

Priority Applications (No Type Date): US 2000602127 A 20000623

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
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US 6253151	B1	21		G01C-021/36	
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EP 1167924	A2	E		G01C-021/34	
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Designated States (Regional): AL AT BE CH CY DE DK ES FI FR GB GR IE IT  
LI LT LU LV MC MK NL PT RO SE SI TR  
JP 2002221422 A 56 G01C-021/00

Abstract (Basic): US 6253151 B1

NOVELTY - The end user inputs the requests into user interface (131) and gets the response to requests. The navigation programming, processes the input request using geographic database (140) to determine responses. The error report programming has routine that collects data indicating error and sends a report including data indicating error, in response to error indication by end user to interface.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:

(a) a reports obtaining method from end user about perceived error;  
and

(b) a vehicle navigation system operation method.

USE - Navigation system used in vehicles such as automobile truck,

bus for reporting error of geographic data which includes information about location of roads, intersections, estimates travel time along road segments , speed limits along roads, etc.

ADVANTAGE - The error report from end users is provided consistently with sufficient detail so that the geographic data base developer determines the causes of the perceived errors, thus the end users easily makes report about errors that they encounter while using navigation systems and thereby develops goodwill between the end user and the geographic database developer.

DESCRIPTION OF DRAWING(S) - The figure shows the components of navigation programming including error reporting program.

User interface (131)  
Geographic database (140)  
pp; 21 DwgNo 3/12

Title Terms: NAVIGATION; SYSTEM; VEHICLE; ERROR; REPORT; PROGRAM; ROUTINE;  
COLLECT; DATA; INDICATE; ERROR; SEND; REPORT; DATA; INDICATE; ERROR;

RESPOND; ERROR; INDICATE; USER

Derwent Class: P85; S02; T01; X22

International Patent Class (Main): G01C-021/00; G01C-021/34; G01C-021/36

International Patent Class (Additional): G06F-017/30 ; G08G-001/137;

G09B-029/00; G09B-029/10

File Segment: EPI; EngPI

19/5/26 (Item 17 from file: 350)

DIALOG(R) File 350:Derwent WPIX

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013661657 \*\*Image available\*\*

WPI Acc No: 2001-145869/200115

Related WPI Acc No: 1999-153176; 1999-560922; 2000-012086; 2001-610299;  
2002-254238; 2003-196808; 2003-361731; 2003-446947

XRPX Acc No: N01-106651

Visual web site analysis program consists of executable mapping code comprising layout routine which positions icons within map based on parent-child relationship

Patent Assignee: MERCURY INTERACTIVE CORP (MERC-N)

Inventor: POGREBISKY M; WEINBERG A

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 6144962	A	20001107	US 9628474	P	19961015	200115 B
			US 97843265	A	19970411	

Priority Applications (No Type Date): US 9628474 P 19961015; US 97843265 A  
19970411

Patent Details:

Patent No	Kind	Lan Pg	Main IPC	Filing Notes
US 6144962	A	45	G06F-017/30	Provisional application US 9628474

Abstract (Basic): US 6144962 A

NOVELTY - A mapping code graphically represents content of objects of web site as icons. A layout routine positions and interconnects content object icons within the map based on parent-child relationship of content objects with the tree. The icons of parent objects are spatially grouped together with icons of respective immediate child objects to form hierarchical arrangement of parent-child icon clusters.

DETAILED DESCRIPTION - An executable scanning code scans the web site and generates a representation of web site within a computer memory. The web site representation includes representations of content

objects and links of web site. An executable hierarchy identification code reduces web site representation generated by scanning code to a hierarchical tree representation in which each content object corresponds to respective node of tree. An executable mapping code generates and displays a graphical map of web site on computer screen based on hierarchical tree representation. Hierarchical representation of parent-child icon clusters has child content objects arranged surrounding their respective immediate parents over multiple parent-child levels. The hierarchy identification code is configured to apply shortest path span tree algorithm to the web site representation. INDEPENDENT CLAIMS are also included for following:

- (a) method of facilitating visualization of web site;
- (b) method of generating graphical map of tree data structure on computer screen;
- (c) method of representing hierarchical node link structure on display screen;
- (d) method of graphically representing web document on display screen

USE - For facilitating management and analysis of web site and database **system** utilizing hyperlinks to facilitate user **navigation**.

ADVANTAGE - Enables automatic evaluation of performance and effectiveness of web site by capturing output of web browser for generating sequence of evaluation. Enables automatic scanning and mapping dynamically generated web pages such as web page generated on-the-fly in response to user specified database queries. Enables to quickly detect common problem **areas** such as congested **links** and popular web site exit points. The program can also be applied to other web sites such as intranet sites and network sites that use proprietary client-server protocols.

DESCRIPTION OF DRAWING(S) - The figure shows example of web site map generated by web site manager illustrating menu, tool and filter bars of graphical user interface.

pp; 45 DwgNo 1/24

Title Terms: VISUAL; WEB; SITE; ANALYSE; PROGRAM; CONSIST; EXECUTE; MAP; CODE; COMPRISE; LAYOUT; ROUTINE; POSITION; MAP; BASED; PARENT; CHILD; RELATED

Derwent Class: T01

International Patent Class (Main): G06F-017/30

File Segment: EPI

19/5/27 (Item 18 from file: 350)

DIALOG(R) File 350:Derwent WPIX

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013629685 \*\*Image available\*\*

WPI Acc No: 2001-113893/200113

XRPX Acc No: N01-083672

Data construction method for representing set of actual data values from original source with alternative representation, in which geographic data is stored and sets of data values are used as indexes

Patent Assignee: NAVIGATION TECHNOLOGIES CORP (NAVI-N); MEEK J A (MEEK-I)

Inventor: MEEK J A

Number of Countries: 027 Number of Patents: 004

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
EP 1058197	A2	20001206	EP 2000301663	A	20000301	200113 B
JP 2001028009	A	20010130	JP 2000164644	A	20000601	200122
US 6460046	B1	20021001	US 99323339	A	19990601	200268
US 20030014392	A1	20030116	US 99323339	A	19990601	200308

Priority Applications (No Type Date): US 99323339 A 19990601; US 2002243799 A 20020913

Patent Details:

Patent No	Kind	Lan Pg	Main IPC	Filing Notes
EP 1058197		A2	E 26 G06F-017/30	
Designated States (Regional): AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI				
JP 2001028009	A	23	G06F-017/30	
US 6460046	B1		G06F-017/30	
US 20030014392	A1		G06F-007/00	Cont of application US 99323339 Cont of patent US 6460046

Abstract (Basic): EP 1058197 A2

**NOVELTY** - The data construction method involves forming, storing and using sets of **data** values as **indexes** for **geographic data** such that the amount of **space** required to store the information content of the data values is reduced.

**DETAILED DESCRIPTION** - The method provides a data construction method for storing data, and involves representing a set of actual data values from an original source of data with an alternative representation. One or more parameters of a formula are determined to approximate the set of actual data values in the original source of data. For each actual data value in the original source of data, the difference between the actual data value and the value predicted by the formula is determined. The difference for each actual data value is stored in a data construction along with one or more parameters. The alternative representation preserves the information content of the actual data values from the original source of data while reducing the storage requirements for storing the information on a medium. **INDEPENDENT CLAIMS** are included for; a data construction stored on a computer-readable physical storage medium; a method for using a data construction that contains an alternative representation of actual data values.

**USE** - Forming, storing and using sets of **data** values as **indexes** for **geographical data** such that the amount of **space** required to store the information content of the data values is reduced.

**ADVANTAGE** - Enables efficient forming and using **data** construction for storing **geographical** information on a medium, and that is compatible with organisations and structures incorporated into the geographic database that is used by the **navigation system**.

**DESCRIPTION OF DRAWING(S)** - The drawing shows a block diagram illustrating the components of a **navigation system** in which an embodiment of the method for storing data using an alternative representation can be incorporated.

- Navigation system** (10)
- Navigation application programming** (12)
- Geographic data** (14)
- Medium** (16)
- Data records** (19)
- pp; 26 DwgNo 1/10

Title Terms: DATA; CONSTRUCTION; METHOD; REPRESENT; SET; ACTUAL; DATA; VALUE; ORIGINAL; SOURCE; ALTERNATIVE; REPRESENT; GEOGRAPHICAL; DATA; STORAGE; SET; DATA; VALUE; INDEX

Derwent Class: T01

International Patent Class (Main): G06F-007/00 ; G06F-017/30

International Patent Class (Additional): G01C-021/00; G06K-009/62

File Segment: EPI

19/5/28 (Item 19 from file: 350)  
DIALOG(R)File 350:Derwent WPIX  
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013465646     \*\*Image available\*\*  
WPI Acc No: 2000-637589/200061  
Related WPI Acc No: 2001-578792  
XRPX Acc No: N00-472848

Geographical database construction method for vehicle mounted navigation system, involves displaying preview of calculated route along with references for indicating location of actual detailed text

Patent Assignee: NAVIGATION TECHNOLOGIES CORP (NAVI-N)

Inventor: ASHBY R; FRIEDERICH M; McDONOUGH W

Number of Countries: 027 Number of Patents: 003

**Number of claims:**

Patent No	Kind	Date	Applicant No	Kind	Date	Week	
US 6122593	A	20000919	US 99368283	A	19990803	200061	B
EP 1074959	A2	20010207	EP 2000301865	A	20000307	200109	
JP 2001091287	A	20010406	JP 2000234491	A	20000802	200126	

Priority Applications (No Type Date): US 99368283 A 19990803

#### Patent Details:

Patent Details:

Patent No	Kind	LaN	Pg	Main IPC	Filing Notes
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Patent No. Ring Date Pg. AGENT FILE  
US 6122593 A 34 G06F-017/00

EP 1074959 A2 E G08G-001/0968

Designated States (Regional): AL AT BE CH CY DE DK ES FI FR GB GR IE IT  
LI LT LU LV MC MK NL PT RO SE SI  
JP 2001091287 A 28 G01C-021/00

Abstract (Basic): US 6122593 A

**NOVELTY** - The navigation system (110) retrieves required route information from geographical database for calculating route solution. In order to show preview of calculated route before detailed maneuvering, portion of information used from database for route calculation is indicated along with reference to actual detailed text that has name of roads.

**DETAILED DESCRIPTION** - The detailed text referred by calculated route solution from geographical database, includes several information required for the user. The user can retrieve information regarding traffic, turn restriction, speed limit and geographical location of routes. The two main entities of database are node and **segment data**. The node **data** indicating **geographical location** are arranged according to distance, and **segment data** which gives information such as speed, traffic etc., are arranged in alphabetic order.

USE - For navigation system mounted in vehicle such as automobiles, trucks, buses.

**ADVANTAGE** - Displays preview of route calculation along with references of detailed text information, thereby enabling user to attain clear picture of the route and other details regarding calculation of route solution.

DESCRIPTION OF DRAWING(S) - The figure shows block diagram of navigation system which use geographical database.

### Navigation system (110)

pp; 34 DwqNo 1/18

Title Terms: GEOGRAPHICAL; DATABASE; CONSTRUCTION; METHOD; VEHICLE; MOUNT;  
NAVIGATION; SYSTEM; DISPLAY; PREVIEW; CALCULATE; ROUTE; REFERENCE;  
INDICATE; LOCATE; ACTUAL; DETAIL; TEXT

Derwent Class: P85; S02; T01; W06; X22

International Patent Class (Main): G01C-021/00; G06F-017/00 ;  
G08G-001/0968

Set	Items	Description
S1	5	AU=(JAUGILAS J? OR JAUGILAS, J?)
S2	1528409	DATA? ? OR NFORMATION OR INFO
S3	60733	NAVIGAT?
S4	4111899	SOFTWARE? ? OR PROGRAM? OR APPLICATION? ? OR FREEWARE? OR - SHAREWARE? OR SYSTEM? ?
S5	2086009	GEOGRAPH? OR LOCATION? OR AREA? ? OR REGION? ? OR ZONE? ? - OR SUBAREA OR SUBREGION? OR LOCALIT?
S6	1523439	INTESECT? OR CROSS??? OR MEET? OR LINK? OR OVERLAP? OR ENC- ROACH?
S7	214038	INDEX?? OR INDICES OR POINTER? ?
S8	19191	S3(10N)S4
S9	2333708	PARCEL? OR SPATIAL? OR SPACE? ? OR SEGMENT? OR GROUP? ? OR DIVISION? ?
S10	5	S1 AND S8
S11	82643	S5(5N)S2
S12	864	S11 AND S8
S13	21	S12 AND S7
S14	91092	S5(10N)S6
S15	181	S14 AND S8
S16	35	S15 AND (S7 OR S9)
S17	58	S12(15N)S9
S18	110	S10 OR S13 OR S16 OR S17
S19	46	S18 AND IC=G06F?

? show file

File 344:Chinese Patents Abs Aug 1985-2004/May

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File 347:JAPIO Nov 1976-2004/Jan(Updated 040506)

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File 350:Derwent WPIX 1963-2004/UD,UM &UP=200434

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File 371:French Patents 1961-2002/BOPI 200209

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19/5/1 (Item 1 from file: 347)  
DIALOG(R) File 347:JAPIO  
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07596889 \*\*Image available\*\*  
NAVIGATION SYSTEM WITH DISTRIBUTED COMPUTING ARCHITECTURE

PUB. NO.: 2003-090735 [JP 2003090735 A]  
PUBLISHED: March 28, 2003 (20030328)  
INVENTOR(s): NATESAN SENTHIL  
CRANE AARON  
ROBARE PHILIP  
APPLICANT(s): NAVIGATION TECHNOL CORP  
APPL. NO.: 2002-154729 [JP 2002154729]  
FILED: April 19, 2002 (20020419)  
PRIORITY: 01 838094 [US 2001838094], US (United States of America),  
April 19, 2001 (20010419)  
INTL CLASS: G01C-021/00; G06F-015/00 ; G06F-017/30 ; G08G-001/137

#### ABSTRACT

PROBLEM TO BE SOLVED: To provide geographic data to end users' computing platforms.

SOLUTION: A server maintains downloadable **geographic data** that are organized into pre-computed **parcels** that correspond to pre-determined sub-areas into which the entire geographic region serviced by the server is divided. The server responds to requests from the end users' computing platforms for navigation services and data by sending selected pre-computed **parcels of geographic data** to the end users' computing platforms. The end users' computing platforms store the pre-computed **parcels** received from the server in a cache memory. The end users' computing platforms use the data in the pre-computed parcels to provide navigation-related features locally.

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19/5/2 (Item 2 from file: 347)  
DIALOG(R) File 347:JAPIO  
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07481635 \*\*Image available\*\*  
ADVERTISEMENT INFORMATION DISPLAY DEVICE AND PROGRAM THEREOF

PUB. NO.: 2002-350153 [JP 2002350153 A]  
PUBLISHED: December 04, 2002 (20021204)  
INVENTOR(s): FUJIWARA HIDEKI  
TAKAHASHI AKITO  
APPLICANT(s): MOTIVATION FOLLOW OFFICE KK  
APPL. NO.: 2001-161671 [JP 2001161671]  
FILED: May 30, 2001 (20010530)  
INTL CLASS: G01C-021/00; G06F-017/30 ; G06F-017/60 ; G08G-001/0969;  
G09B-029/00; G09B-029/10; G09F-027/00; H04B-001/16

#### ABSTRACT

PROBLEM TO BE SOLVED: To obtain technology capable of effectively displaying highly fresh information on small-to-medium-sized businesses in close touch with regions on a display of a car **navigation system** or the like of which the **space** is limited.

SOLUTION: The car **navigation system** 15 is provided with an advertisement information receiving part 33 for receiving and storing advertisement information related to at least locational information on each business in an advertisement information accumulating part 37, a display data creating part 34 for arranging an icon corresponding to the advertisement information on map data according to each locational information and creating display data, an LCD 21 for displaying the display data, an input part 22 for selecting the icons displayed on the LCD 21, and a display information extracting part 32 for reading the advertisement information corresponding to the icon from the advertisement information accumulating part 37 and displaying it on the LCD 21 in the case of the selection of the specific icon.

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19/5/3 (Item 3 from file: 347)  
DIALOG(R) File 347:JAPIO  
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07279606 \*\*Image available\*\*  
LOCATION GUIDING SYSTEM, ADVERTISING SYSTEM, SPEECH DATA REGISTERING TERMINAL, LOCATION GUIDING TERMINAL, AND STORING MEDIUM

PUB. NO.: 2002-148070 [JP 2002148070 A]  
PUBLISHED: May 22, 2002 (20020522)  
INVENTOR(s): KAMIYA TSUYOSHI  
APPLICANT(s): YAMAHA MOTOR CO LTD  
APPL. NO.: 2000-346298 [JP 2000346298]  
FILED: November 14, 2000 (20001114)  
INTL CLASS: G01C-021/00; **G06F-017/60**; G08G-001/09; G08G-001/0969;  
G10L-013/00; G10L-013/04; H04S-007/00

#### ABSTRACT

PROBLEM TO BE SOLVED: To provide a location guiding system that is ideal for advertising an object to be guided and for sensibly grasping the positional relation between the object to be guided and the present **location**.

SOLUTION: A speech **data** registering terminal 200 inputs **location data**, etc., used for specifying the **location** of a sound source which is virtually positioned in a virtual **space** correspondingly to the position of an object, and registers speech **data** correlatively with the inputted **location data**, etc. In addition, the terminal 200 transmits the speed data, corresponding location data, etc., stored in a speed data registering DB 244 to an on-vehicle navigation system. When the navigation system receives the speech data, location data, etc., the system positions the sound source to the position specified by the received **location data**, etc., in the virtual **space** correspondingly to the received speech data. When the system assumes that speech is outputted from the sound source in accordance with the movement of a vehicle 100, the system generates and outputs such speech that is considered to be observed in the vehicle 100 from the sound source in a pseudo-executing way based on the corresponding speech data.

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19/5/4 (Item 4 from file: 347)  
DIALOG(R) File 347:JAPIO

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06800582 \*\*Image available\*\*

## FORMATION FOR THREE-DIMENSIONAL MAP DISPLAY AND NAVIGATION SYSTEM

PUB. NO.: 2001-028065 [JP 2001028065 A]  
PUBLISHED: January 30, 2001 (20010130)  
INVENTOR(s): RITTER DIETER  
APPLICANT(s): SIEMENS AG  
APPL. NO.: 2000-148424 [JP 2000148424]  
FILED: May 19, 2000 (20000519)  
PRIORITY: 99110003 [EP 99110003], EP (European Patent Office), May 21, 1999 (19990521)  
INTL CLASS: G06T-017/50; G01C-021/00; G06F-017/60 ; G08G-001/0969; G09B-029/00

### ABSTRACT

PROBLEM TO BE SOLVED: To display a three-dimensional map on the basis of two-dimensional digital road map data by connecting a road **segment** to be displayed to different **geographical** three-dimensional topology **data** and then, outputting the road **segment** to a display device.

SOLUTION: Assigned points (x), (y), and (z) are specified from a different geographical (geo)-topology-data bank with respect to each of points (s) and (t) of a two-dimensional road map data bank to form a three-dimensional map display. When the accurate correspondence places of the points (s) and (t) do not exist, the assigned three-dimensional topology data is obtained by the interpolation of an adjacent point of the different geographical (geo)-topology-data bank. Thus, it is possible not only to differently and three-dimensional display an object such as a mountain range and a building which have clear characteristics but also to three-dimensional display the entire visual field to be offered to the user of a navigation system.

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19/5/5 (Item 5 from file: 347)

DIALOG(R) File 347:JAPIO

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06442822 \*\*Image available\*\*

## METHOD AND APPARATUS FOR RECORDING OF GEOGRAPHICAL DATA AS WELL AS NAVIGATION AND POSITION MEASURING SYSTEM AND ITS USAGE METHOD

PUB. NO.: 2000-028392 [JP 2000028392 A]  
PUBLISHED: January 28, 2000 (20000128)  
INVENTOR(s): MAQAIRE JEAN-PIERRE ALBERT  
APPLICANT(s): MLR ELECTRONIQUE  
APPL. NO.: 11-052628 [JP 9952628]  
FILED: March 01, 1999 (19990301)  
PRIORITY: 9802430 [FR 982430], FR (France), February 27, 1998 (19980227)  
INTL CLASS: G01C-021/20; G01C-015/00; G06F-003/03 ; G09B-029/10

### ABSTRACT

PROBLEM TO BE SOLVED: To provide a **geographical - data** recording apparatus which does not take up a lot of **space** and which is lightweight.

SOLUTION: An electronic rotating ruler 1 is fixed onto a map. The coordinates of a point which is situated on a shaft 4 and which constitutes the origin of a polar coordinate system are input. The coordinates of a

second arbitrary point which is separated from the shaft 4 are input. By using the electronic rotating ruler 1, a sighting cursor 6 is positioned in the second position, and the coordinates of its position are set on the map in the same manner. By the push button 14 of a transfer device, the coordinates are transferred to a data recording device in a position measuring apparatus. The sighting cursor 6 is arranged in a desired point. While the transfer of the polar coordinates of a recording point is being controlled by the operation of the push button 14, all points and all lines as well as a specific line and a specific zone, on the map, which are to be recorded are input.

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19/5/6 (Item 6 from file: 347)

DIALOG(R) File 347:JAPIO

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06386333 \*\*Image available\*\*

#### IMPROVED MEMORY MANAGEMNT FOR NAVIGATION SYSTEM

PUB. NO.: 11-327979 [JP 11327979 A]

PUBLISHED: November 30, 1999 (19991130)

INVENTOR(s): CROWLEY PAUL

JAUGILAS JOHN

NASH ALEX

NATESAN SENTHIL K

LAMPERT DAVID S

APPLICANT(s): NAVIGATION TECHNOL CORP

APPL. NO.: 10-377975 [JP 98377975]

FILED: December 16, 1998 (19981216)

PRIORITY: 49747 [US 49747], US (United States of America), March 27, 1998 (19980327)

INTL CLASS: G06F-012/00 ; G01C-021/00; G06F-012/08 ; G06F-012/08 ; G06F-017/30 ; G09B-029/00; G09B-029/10

#### ABSTRACT

PROBLEM TO BE SOLVED: To make the resources of the navigation system efficiently usable providing a data structure which identifies respective parts of geographic data stored in a cache and relates the respective parts and the locations of the parts in the cache to each other.

SOLUTION: The buffer 220 of a memory used for parcel caching is an adjacent part of the memory. A cache menaging function assigns a part 260 to the buffer 220 which is relatively small for use as a header pool 262. The header pool 262 consists of parcle headers, which is each related to a separated parcle in the buffer of the parcle buffer. At this time, plural parcle heaters are composed of an array in allocation structure. A part 260 of the memory used for the header pool 262 can be determined as a function of the total size of the buffer 220 where it is positioned.

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19/5/7 (Item 7 from file: 347)

DIALOG(R) File 347:JAPIO

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06385789 \*\*Image available\*\*

INTERLEAVING OF DATA TYPE IN GEOGRAPHIC DATA BASE AND METHOD FOR USING THE SAME IN NAVIGATION APPLICATION

PUB. NO.: 11-327435 [JP 11327435 A]  
PUBLISHED: November 26, 1999 (19991126)  
INVENTOR(s): LIVSHUTZ MICHAEL  
ISRANI VIJAY S  
ASHBY RICHARD A  
APPLICANT(s): NAVIGATION TECHNOL CORP  
APPL. NO.: 10-378102 [JP 98378102]  
FILED: December 18, 1998 (19981218)  
PRIORITY: 39586 [US 39586], US (United States of America), March 16,  
1998 (19980316)  
INTL CLASS: G09B-029/00; G01C-021/00; G06F-017/30 ; G08G-001/0969;  
G09B-029/10

ABSTRACT

PROBLEM TO BE SOLVED: To make it possible to rapidly and efficiently make a navigation system using different types access and to improve the performance of the **navigation system** by interleaving a **parcel** of a data record of a first type with a **parcel** of data record of a second type.

SOLUTION: Intermediate format files 902 separated by each of the respective data types and layers are formed by starting from a geographic data base 900 supplied in a universal data format. After the separated intermediate format files 902 are formed, the intermediate format files 902 are parceled and the parcels 906 of the data records of the respective data types are formed. When the separated parcels 906 by each of the respective types and layers are formed, the parcels by each of the respective types and layers are connected to the single file. Namely, the parcels are selected from the two or more parceled intermediate format files 906 and are subjected to interleaving.

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19/5/8 (Item 8 from file: 347)  
DIALOG(R) File 347:JAPIO  
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06202638 \*\*Image available\*\*  
METHOD AND DEVICE FOR MANAGING PARKING LOT

PUB. NO.: 11-144195 [JP 11144195 A]  
PUBLISHED: May 28, 1999 (19990528)  
INVENTOR(s): YAMAGUCHI HIROYUKI  
APPLICANT(s): CHUGOKU ENGINEERING KK  
APPL. NO.: 09-307033 [JP 97307033]  
FILED: November 10, 1997 (19971110)  
INTL CLASS: G08G-001/14; G06F-017/60

ABSTRACT

PROBLEM TO BE SOLVED: To provide a parking lot managing method which shows vacancy and full information of a parking lot and the current position of a vehicle on a map of a **navigation system** without separately providing each parking lot with a sensor in a parking lot managing method which shows the current position of the vehicle and a parking lot that has vacancy on a map of a **navigation system** that is mounted on the vehicle and by which a traveling vehicle can easily know the nearest parking lot that has vacancy.

SOLUTION: A white zone is formed in each parking **space** of a parking lot on a street. When a white zone is recovered completely, a deciding means 9

decides that a vacant parking **space** exists about each parking device that **overlaps** an image of an object **area** which is taken by a camera 2 mounted on an artificial satellite 1 after performing binarization processing of it on map information that shows the position of a parking lot which is acquired from memory 7 and extracts the parking lot on the map from a place that corresponds to the parking lot of map information by an extracting means 8. The result is shown together with the current position of the vehicle on an LCD of the **navigation system**.

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19/5/9 (Item 9 from file: 347)

DIALOG(R)File 347:JAPIO  
(c) 2004 JPO & JAPIO. All rts. reserv.

05795231 \*\*Image available\*\*  
PARKING AREA RESERVATION SYSTEM

PUB. NO.: 10-078331 [JP 10078331 A]  
PUBLISHED: March 24, 1998 (19980324)  
INVENTOR(s): KAWAI ATSUSHI  
APPLICANT(s): BROTHER IND LTD [000526] (A Japanese Company or Corporation),  
JP (Japan)  
APPL. NO.: 08-232941 [JP 96232941]  
FILED: September 03, 1996 (19960903)  
INTL CLASS: [6] G01C-021/00; G06F-017/60  
JAPIO CLASS: 46.1 (INSTRUMENTATION -- Measurement); 34.4 (SPACE  
DEVELOPMENT -- Communication); 45.4 (INFORMATION PROCESSING  
-- Computer Applications)  
JAPIO KEYWORD: R011 (LIQUID CRYSTALS); R131 (INFORMATION PROCESSING --  
Microcomputers & Microprocessors)

#### ABSTRACT

PROBLEM TO BE SOLVED: To provide a parking area reservation system which can easily reserve a parking space and can surely guide a vehicle to a reserved parking space.

SOLUTION: A reservation is specified using navigation system conditions including positional information on a destination, and the reservation data is delivered to a parking area administrative host on a telephone line (S3, S4). The parking area administrative host retrieves a parking area having a free parking **division** on the basis of the reservation conditions (S5). On receiving a reservation order from the **navigation system** the parking area administrative host reserves a free parking **division** in a retrieved parking area.

19/5/10 (Item 1 from file: 350)

DIALOG(R)File 350:Derwent WPIX  
(c) 2004 Thomson Derwent. All rts. reserv.

015977462 \*\*Image available\*\*  
WPI Acc No: 2004-135312/200414  
XRPX Acc No: N04-107970

Geographic database updating method for vehicle navigation system ,  
involves updating each parcel of data corresponding to rectangular  
sub- areas , for providing updated version of database  
Patent Assignee: NAVIGATION TECHNOLOGIES CORP (NAVI-N)  
Inventor: ASHBY R A

Number of Countries: 032 Number of Patents: 002

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
EP 1385102	A2	20040128	EP 2003254550	A	20030721	200414 B
JP 2004070323	A	20040304	JP 2003199955	A	20030722	200417

Priority Applications (No Type Date): US 2002201098 A 20020723

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
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EP 1385102	A2	E	27	G06F-017/30	
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Designated States (Regional): AL AT BE BG CH CY CZ DE DK EE ES FI FR GB  
GR HU IE IT LI LT LU LV MC MK NL PT RO SE SI SK TR

JP 2004070323	A	25	G09B-029/00
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Abstract (Basic): EP 1385102 A2

NOVELTY - The master database (100) of original version, is divided into several **parcels** of **data** corresponding to the rectangular sub-**areas** of the coverage **area**. Each **parcel** of **data** is updated corresponding to the changes in geographical features of the corresponding sub-area. An updated version of database is formed by the updated data.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:

- (1) method of providing incremental updates for geographic database;
- (2) apparatus for updating geographic database; and
- (3) computer readable medium storing geographic database updating program.

USE - For updating geographic database for vehicle navigation system for use by vehicle fleets, trucking company, package delivery service, vehicle dealers.

ADVANTAGE - Large amount of data is updated with relatively small incremental update transaction.

DESCRIPTION OF DRAWING(S) - The figure shows an explanatory view of the geographic database updating system.

master database (100)  
original database (110)  
compiler (111)  
updated database (320)  
data access layer (340)  
pp; 27 DwgNo 8/11

Title Terms: GEOGRAPHICAL; DATABASE; UPDATE; METHOD; VEHICLE; NAVIGATION; SYSTEM; UPDATE; PARCEL; DATA; CORRESPOND; RECTANGLE; SUB; AREA; UPDATE; VERSION; DATABASE

Derwent Class: P85; S02; T01; X22

International Patent Class (Main): G06F-017/30 ; G09B-029/00

International Patent Class (Additional): G01C-021/00; G08G-001/0969

File Segment: EPI; EngPI

19/5/11 (Item 2 from file: 350)

DIALOG(R) File 350:Derwent WPIX  
(c) 2004 Thomson Derwent. All rts. reserv.

015838029 \*\*Image available\*\*

WPI Acc No: 2003-900233/200382

XRPX Acc No: N03-718630

Velocity model accuracy improving method for inertial navigation systems , involves adjusting portion of velocity model based on portion of other velocity model and establishing spatial relationship between two objects

Patent Assignee: JOHNSON M J (JOHN-I); KRIZIK M A (KRIZ-I); SWOPE C B (SWOP-I); MOTOROLA INC (MOTI )

Inventor: JOHNSON M J; KRIZIK M A; SWOPE C B

Number of Countries: 103 Number of Patents: 002

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 20030200067	A1	20031023	US 2002128084	A	20020423	200382 B
WO 200391873	A1	20031106	WO 2003US10880	A	20030409	200401

Priority Applications (No Type Date): US 2002128084 A 20020423

Patent Details:

Patent No	Kind	Lan Pg	Main IPC	Filing Notes
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US 20030200067	A1	13	G06F-017/10	
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WO 200391873	A1	E	G06F-007/60	
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Designated States (National): AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NI NO NZ OM PH PL PT RO RU SC SD SE SG SK SL TJ TM TN TR TT TZ UA UG UZ VC VN YU ZA ZM ZW

Designated States (Regional): AT BE BG CH CY CZ DE DK EA EE ES FI FR GB GH GM GR HU IE IT KE LS LU MC MW MZ NL OA PT RO SD SE SI SK SL SZ TR TZ UG ZM ZW

Abstract (Basic): US 20030200067 A1

NOVELTY - The method involves establishing two velocity models for two objects (190,195), respectively. A **spatial** relationship is established between the two objects. A portion of one velocity model is adjusted based on a portion of the other velocity model and the **spatial** relationship between the two objects. One of the velocity models is derived partially from a reference velocity state estimate and an estimated difference.

DETAILED DESCRIPTION - The estimated difference lies between the reference velocity state estimate and a current velocity state estimate of the corresponding object.

USE - Used for improving accuracy of velocity models in inertial **navigation systems** and other state-based **navigation systems**.

ADVANTAGE - The method maintains the accuracy of the velocity model of a target object without the need to bring target object to a reference object in a known or fixed **location** and establishing radio frequency or other **links** with a reference object. A properly negotiated velocity model is statistically more accurate than any single velocity model. The method is easily extensible to higher dimensionality and is equally applicable to other velocity model parameters.

DESCRIPTION OF DRAWING(S) - The drawing shows a method of connecting two target devices.

Objects (190,195)

Lateral axes (192, 197)

Position difference (199)

pp; 13 DwgNo 1/6

Title Terms: VELOCITY; MODEL; ACCURACY; IMPROVE; METHOD; INERTIA; NAVIGATION; SYSTEM; ADJUST; PORTION; VELOCITY; MODEL; BASED; PORTION; VELOCITY; MODEL; ESTABLISH; **SPACE**; RELATED; TWO; OBJECT

Derwent Class: T01; W06

International Patent Class (Main): G06F-007/60 ; G06F-017/10

File Segment: EPI

19/5/12 (Item 3 from file: 350)

DIALOG(R) File 350:Derwent WPIX

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015784418 \*\*Image available\*\*

WPI Acc No: 2003-846621/200379

XRXPX Acc No: N03-676642

Map editing and displaying apparatus for vehicle navigation system ,  
assigns map name to range of acquired map data based on index data  
appended with corresponding map data

Patent Assignee: MATSUSHITA ELECTRIC IND CO LTD (MATU ); MATSUSHITA DENKI  
SANGYO KK (MATU )

Inventor: OJIMA Y

Number of Countries: 035 Number of Patents: 005

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
EP 1357356	A2	20031029	EP 20038848	A	20030425	200379 B
US 20030204520	A1	20031030	US 2003423639	A	20030425	200379
JP 2003316258	A	20031107	JP 2002126248	A	20020426	200381
CN 1453727	A	20031105	CN 2003136800	A	20030426	200408
KR 2003084784	A	20031101	KR 200326489	A	20030425	200418

Priority Applications (No Type Date): JP 2002126248 A 20020426

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
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EP 1357356	A2	E	10	G01C-021/32	
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Designated States (Regional): AL AT BE BG CH CY CZ DE DK EE ES FI FR GB  
GR HU IE IT LI LT LU LV MC MK NL PT RO SE SI SK TR

US 20030204520	A1	-		G06F-007/00	
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JP 2003316258	A	7		G09B-029/00	
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CN 1453727	A			G06F-017/30	
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KR 2003084784	A			G08G-001/0969	
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Abstract (Basic): EP 1357356 A2

NOVELTY - The partial map data acquired from the map database (8) are stored in the storing unit (4). A map name assigning unit assigns a map name to partial map data on the basis of **index** data that are appended to map data.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:

- (1) map managing system;
- (2) map name assigning method; and
- (3) map storing medium.

USE - For vehicle **navigation system**.

ADVANTAGE - Automatically assigns a map name to acquired map data which allows the user to easily recognize an **area** , to easily identify desired map **data** . The need for performing complicating operations are avoided.

DESCRIPTION OF DRAWING(S) - The figure shows a block diagram of map editing and displaying apparatus.

communication section (1)

control section (3)

map data storing section (4)

map database storing section (8)

map editing and displaying apparatus (9)

pp; 10 DwgNo 1/4

Title Terms: MAP; EDIT; DISPLAY; APPARATUS; VEHICLE; NAVIGATION; SYSTEM;

ASSIGN; MAP; NAME; RANGE; ACQUIRE; MAP; DATA; BASED; INDEX ; DATA;

APPENDAGE; CORRESPOND; MAP; DATA

Derwent Class: P85; S02; T01; X22

International Patent Class (Main): G01C-021/32; G06F-007/00 ; G06F-017/30  
; G08G-001/0969; G09B-029/00

International Patent Class (Additional): G09B-029/10

19/5/13 (Item 4 from file: 350)  
DIALOG(R) File 350:Derwent WPIX  
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015635458 \*\*Image available\*\*  
WPI Acc No: 2003-697641/200366  
XRPX Acc No: N03-557024

**Airport taxiway navigation information providing method involves receiving route specifying taxiways, and highlighting displayed map indicating position of aircraft while taxiing at airport**  
Patent Assignee: BOEING CO (BOEI ); DOOSE R (DOOS-I); ELLERBROCK R W (ELLE-I); HULET G L (HULE-I); JAUGILAS J M (JAUG-I); MAJKA M T (MAJK-I)  
Inventor: DOOSE R; ELLERBROCK R W; HULET G L; JAUGILAS J W ; MAJKA M T;  
**JAUGILAS J M**

Number of Countries: 102 Number of Patents: 003

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
WO 200371228	A2	20030828	WO 2003US4847	A	20030219	200366 B
US 20040006412	A1	20040108	US 2002358327	P	20020219	200404
			US 2002358339	P	20020219	
			US 2003369187	A	20030219	
AU 2003216302	A1	20030909	AU 2003216302	A	20030219	200427

Priority Applications (No Type Date): US 2002358339 P 20020219; US 2002358327 P 20020219; US 2003369187 A 20030219

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
WO 200371228	A2	E	57	G01C-023/00	

Designated States (National): AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ OM PH PL PT RO RU SC SD SE SG SK SL TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

Designated States (Regional): AT BE BG CH CY CZ DE DK EA EE ES FI FR GB GH GM GR HU IE IT KE LS LU MC MW MZ NL OA PT SD SE SI SK SL SZ TR TZ UG ZM ZW

US 20040006412 A1 G06F-019/00 Provisional application US 2002358327

AU 2003216302 A1 G01C-023/00 Provisional application US 2002358339 Based on patent WO 200371228

Abstract (Basic): WO 200371228 A2

NOVELTY - The method involves displaying a map showing the taxiways of an airport. A route specifying taxiways is received at the airport as specified by a taxi clearance provided by ground control. The taxiways are then highlighted on the displayed map indicating the position of the aircraft while taxiing at the airport.

DETAILED DESCRIPTION - An INDEPENDENT CLAIM is also included for a computer readable medium.

USE - Used for providing taxiway navigation information to crew members at airports.

ADVANTAGE - The method helps the crew members of a taxiing airplane to correctly receive and follow the cleared taxi route, and to stop at hold short lines.

DESCRIPTION OF DRAWING(S) - The drawing shows user interfaces of an airport taxiway **navigation system**.

Image (100)  
Taxi route text box (102)

Taxiway gate buttons (111-120)  
pp; 57 DwgNo 7/23

Title Terms: AIRPORT; TAXIWAY; NAVIGATION; INFORMATION; METHOD; RECEIVE;  
ROUTE; SPECIFIED; HIGHLIGHT; DISPLAY; MAP; INDICATE; POSITION; AIRCRAFT;  
TAXI; AIRPORT

Derwent Class: S02; T01; W06

International Patent Class (Main): G01C-023/00; G06F-019/00

International Patent Class (Additional): G08G-005/06; G08G-005/066

File Segment: EPI

19/5/14 (Item 5 from file: 350)

DIALOG(R) File 350:Derwent WPIX  
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015270627 \*\*Image available\*\*

WPI Acc No: 2003-331556/200331

Related WPI Acc No: 2003-288395

XRPX Acc No: N03-265649

**Geospatial database generation system for onboard navigation applications, develops data elements indicating objects and location of objects, based on sensor inputs representing geospatial data of host vehicle travel path**

Patent Assignee: DONATH M (DONA-I); NEWSTROM B J (NEWS-I); SHANKWITZ C R (SHAN-I)

Inventor: DONATH M; NEWSTROM B J; SHANKWITZ C R

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 20030023614	A1	20030130	US 2001306248	P	20010718	200331 B
			US 2002197273	A	20020717	

Priority Applications (No Type Date): US 2001306248 P 20010718; US 2002197273 A 20020717

Patent Details:

Patent No	Kind	Lan Pg	Main IPC	Filing Notes
US 20030023614	A1	23	G06F-007/00	Provisional application US 2001306248

Abstract (Basic): US 20030023614 A1

NOVELTY - A lane level data system of a database developer (1302) receives inputs from several sensors mounted on a host vehicle. The sensor inputs include objects representing roadway lane boundary, mailbox, tunnel walls, curbs, etc., adjacent to travel paths of the host vehicle. The data system develops **data** elements indicating objects and **location** of objects in a three-dimensional (3D) **space** based on the sensor inputs.

DETAILED DESCRIPTION - An INDEPENDENT CLAIM is also included for geospatial database generation method.

USE - Geospatial database generation system (GDGS) for vehicles such as aircraft, vehicle traveling on or underwater, construction equipment, and snowmobiles, with onboard intelligent subsystems e.g. collision avoidance and warning subsystem, lane keeping assist subsystem, platooning assist subsystem and vision enhancement or augmentation subsystem for onboard navigation applications. Also for toll road charging system and management system.

ADVANTAGE - The use of data developer provides accurate location of the lane markings on roads and objects located adjacent to the roads such as signs, light poles, etc. Reduces the number of intersection computations performed for the objects, thereby enhancing the processing speed of the system.

DESCRIPTION OF DRAWING(S) - The figure shows the block diagram of

the geospatial database generation system.  
database developer (1302)  
pp; 23 DwgNo 13/13  
Title Terms: DATABASE; GENERATE; SYSTEM; NAVIGATION; APPLY; DEVELOP; DATA;  
ELEMENT; INDICATE; OBJECT; LOCATE; OBJECT; BASED; SENSE; INPUT; REPRESENT  
; DATA; HOST; VEHICLE; TRAVEL; PATH  
Derwent Class: S02; T01; T07; W06; X22  
International Patent Class (Main): G06F-007/00  
File Segment: EPI

19/5/15 (Item 6 from file: 350)  
DIALOG(R) File 350:Derwent WPIX  
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015227482 \*\*Image available\*\*  
WPI Acc No: 2003-288395/200328  
Related WPI Acc No: 2003-331556  
XRPX Acc No: N03-229226

**Geospatial database management system for onboard vehicle navigation system, has query processor which performs query of geospatial database based on queries received from subsystem to assist driver of host vehicle**

Patent Assignee: DONATH M (DONA-I); NEWSTROM B (NEWS-I)

Inventor: DONATH M; NEWSTROM B

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 20020184236	A1	20021205	US 2001273419	P	20010305	200328 B
			US 2001297894	P	20010613	
			US 2001306248	P	20010718	
			US 200291182	A	20020305	

Priority Applications (No Type Date): US 200291182 A 20020305; US 2001273419 P 20010305; US 2001297894 P 20010613; US 2001306248 P 20010718

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
US 20020184236	A1	18		G06F-007/00	Provisional application US 2001273419

Provisional application US 2001297894  
Provisional application US 2001306248

Abstract (Basic): US 20020184236 A1

NOVELTY - A geospatial database (20) stores **data** elements indicating objects and its **location** in three-dimensional **space**. A database manager (22) maintain the data elements in the database and receives queries from a subsystem (14) to assist a driver of a host vehicle (12). A query processor (24) receives the queries to perform query of the database and return the query results to the database manager.

USE - For use in host vehicle with driver assist subsystem of onboard vehicle navigation system.

ADVANTAGE - The query results are efficiently processed and return to the database manager in real-time with higher accuracy.

DESCRIPTION OF DRAWING(S) - The figure shows the block diagram of the geospatial database management system.

Host vehicle (12)

Subsystem (14)

Geospatial database (20)

Database manager (22)

Query processor (24)

pp; 18 DwgNo 1/6

Title Terms: DATABASE; MANAGEMENT; SYSTEM; VEHICLE; NAVIGATION; SYSTEM;  
QUERY; PROCESSOR; PERFORMANCE; QUERY; DATABASE; BASED; QUERY; RECEIVE;  
SUBSYSTEM; ASSIST; DRIVE; HOST; VEHICLE  
Derwent Class: S02; T01; W06; X22  
International Patent Class (Main): G06F-007/00  
File Segment: EPI

19/5/16 (Item 7 from file: 350)  
DIALOG(R) File 350:Derwent WPIX  
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015149763  
WPI Acc No: 2003-210290/200320  
XRAM Acc No: C03-053670  
XRXPX Acc No: N03-167581

Information system for evaluating physiological response of organism to condition e.g. drug, has specimen-linked database and information management system for accessing information obtained from tissue microarrays

Patent Assignee: MURACA P J (MURA-I); PROTEA BIOSCIENCES INC (PROT-N)

Inventor: MURACA P J

Number of Countries: 100 Number of Patents: 002

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
WO 200302977	A1	20030109	WO 2002US20451	A	20020628	200320 B
US 20030027223	A1	20030206	US 2001302316	P	20010629	200320
				US 2002184694	A	20020628

Priority Applications (No Type Date): US 2001302316 P 20010629; US 2002184694 A 20020628

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
WO 200302977	A1	E	105	G01N-000/00	

Designated States (National): AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ OM PH PL PT RO RU SD SE SG SI SK SL TJ TM TN TR TT TZ UA UG UZ VN YU ZA ZM ZW

Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZM ZW  
US 20030027223 A1 G01N-033/567 Provisional application US 2001302316

Abstract (Basic): WO 200302977 A1

NOVELTY - An information system (I) comprising a tissue microarray having several samples, a specimen-linked database (SLD) containing clinical information of each sample and information relating to G-protein coupled receptor (GPCR) pathway molecules of each sample, and an information management system (IMS) for searching SLD and determining relationships between the clinical information and information relating to GPCR pathway biomolecules, is new.

DETAILED DESCRIPTION - An information system (I) comprises a tissue microarray having several samples, SLD containing several clinical information of each sample and information relating to GPCR pathway molecules of each sample, and an IMS for searching SLD and determining relationships between several clinical information and information relating to GPCR pathway biomolecules, and optionally a user device connected to a network.

An INDEPENDENT CLAIM is also included for relating several information, comprising:

(a) creating a tissue microarray which includes sublocations and

samples;

- (b) identifying the tissue microarray with an identifier and identifying each sublocation with a set of coordinates;
- (c) treating each of several samples with a molecular probe;
- (d) entering several clinical information relating to each sample into a SLD and entering several information relating to GPCR pathway biomolecule of each sample into SLD; and
- (e) correlating the identifier of the tissue microarray and the coordinates of a sublocation with several clinical information and several information relating to GPCR pathway biomolecule of the sublocation using an IMS.

USE - The system and the method are useful for identifying or evaluating physiological responses in an organism to a condition such as a disease or other pathological conditions, a drug or an environmental condition. (I) is useful to model and validate GPCR pathways affecting during one or more physiological response to a condition, and to evaluate the impact of a drug on the physiological responses of an organism. The expression of the one or more biomolecules in the pathway can be determined and information relating to this expression can be provided to the tissue information system. The system can then identify relationships between the expression of the one or more biomolecules in treated patients with the expression of the one or more biomolecules in untreated patients, or in patients treated with different doses, or for different amounts of time, with the drug. The system can preferably be used to predict the impact of changes in the expression of one or more biomolecules on the expression of other biomolecules in the pathway.

pp; 105 DwgNo 0/10

Title Terms: INFORMATION; SYSTEM; EVALUATE; PHYSIOLOGICAL; RESPOND; ORGANISM; CONDITION; DRUG; SPECIMEN; LINK; DATABASE; INFORMATION; MANAGEMENT; SYSTEM; ACCESS; INFORMATION; OBTAIN; TISSUE

Derwent Class: B04; D16; S03

International Patent Class (Main): G01N-000/00; G01N-033/567

International Patent Class (Additional): G01N-033/48; G01N-033/50;

G06F-019/00

File Segment: CPI; EPI

19/5/17 (Item 8 from file: 350)

DIALOG(R) File 350:Derwent WPIX

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015125558 \*\*Image available\*\*

WPI Acc No: 2003-186082/200319

XRPX Acc No: N03-146613

Navigation system for navigating means of locomotion splits navigation system information into two or more sections for processing speech commands

Patent Assignee: BOSCH GMBH ROBERT (BOSC ); GAERTNER U (GAER-I); WOESTEMEYER S (WOES-I)

Inventor: GAERTNER U; WOESTEMEYER S

Number of Countries: 027 Number of Patents: 003

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
EP 1273886	A1	20030108	EP 200212036	A	20020531	200319 B
DE 10132887	A1	20030116	DE 1032887	A	20010706	200319
US 20030125870	A1	20030703	US 2002190780	A	20020708	200345

Priority Applications (No Type Date): DE 1032887 A 20010706

Patent Details:

Patent No Kind Lan Pg Main IPC Filing Notes

EP 1273886 A1 G 11 G01C-021/36  
Designated States (Regional): AL AT BE CH CY DE DK ES FI FR GB GR IE IT  
LI LT LU LV MC MK NL PT RO SE SI TR  
DE 10132887 A1 G01C-021/04  
US 20030125870 A1 G01C-021/26

Abstract (Basic): EP 1273886 A1

NOVELTY - The system (100) has provision for speech (16) and manual (14) input for commands, locations, destinations, etc., linked to a navigation unit (10). A CD-ROM or DVD (12) contains navigation information which has to be matched with the input data. For matching it is proposed that this information is split up into two or more sections for the matching process.

USE - For the navigation of motor vehicles, etc.

ADVANTAGE - Splitting the information requires less storage space for the necessary speech conversion than with conventional systems.

DESCRIPTION OF DRAWING(S) - The figure shows a block diagram of a system to the present invention.

Navigation unit (10)

CD-ROM or DVD (12)

Manual input (14)

Speech input (16)

System (100)

pp; 11 DwgNo 1/12

Title Terms: NAVIGATION; SYSTEM; NAVIGATION; SPLIT; NAVIGATION; SYSTEM;

INFORMATION; TWO; MORE; SECTION; PROCESS; SPEECH; COMMAND

Derwent Class: P86; S02; T01; W04; X22

International Patent Class (Main): G01C-021/04; G01C-021/26; G01C-021/36

International Patent Class (Additional): G06F-003/16 ; G08G-001/0968;

G08G-009/00; G10L-015/00; G10L-015/26

File Segment: EPI; EngPI

19/5/18 (Item 9 from file: 350)

DIALOG(R) File 350: Derwent WPIX

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014997510 \*\*Image available\*\*

WPI Acc No: 2003-058025/200305

Related WPI Acc No: 1997-536017; 2001-373953; 2003-478809; 2003-696558

XRPX Acc No: N03-045042

GPS based vehicle position detection system for terrestrial navigation , estimates altitude data with respect to horizontal and cross -tracks using collected information to identify vehicle location

Patent Assignee: KOHLI S (KOHL-I); SIRF TECHNOLOGY INC (SIRF-N)

Inventor: KOHLI S

Number of Countries: 001 Number of Patents: 002

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 20020143467	A1	20021003	US 96637457	A	19960425	200305 B
			US 96637537	A	19960425	
			US 96638021	A	19960425	
			US 96638882	A	19960425	
			US 9624260	P	19960821	
			US 9626304	P	19960916	
			US 97846067	A	19970425	
			US 97900894	A	19970725	
			US 2000629475	A	20000731	
			US 2000733734	A	20001208	
			US 2001903926	A	20010712	
			US 2002155038	A	20020524	

US 6574558	B2	20030603	US 96637457	A	19960425	200339
			US 96637537	A	19960425	
			US 96638021	A	19960425	
			US 96638882	A	19960425	
			US 9624260	P	19960821	
			US 9626304	P	19960916	
			US 97846067	A	19970425	
			US 97900894	A	19970725	
			US 2000629475	A	20000731	
			US 2000733734	A	20001208	
			US 2001903926	A	20010712	
			US 2002155038	A	20020524	

Priority Applications (No Type Date): US 2002155038 A 20020524; US 96637457 A 19960425; US 96637537 A 19960425; US 96638021 A 19960425; US 96638882 A 19960425; US 9624260 P 19960821; US 9626304 P 19960916; US 97846067 A 19970425; US 97900894 A 19970725; US 2000629475 A 20000731; US 2000733734 A 20001208; US 2001903926 A 20010712

Patent Details:

Patent No	Kind	Lan Pg	Main IPC	Filing Notes
US 20020143467	A1	37	G01C-021/26	CIP of application US 96637457 CIP of application US 96637537 CIP of application US 96638021 CIP of application US 96638882 Provisional application US 9624260 Provisional application US 9626304 CIP of application US 97846067 Cont of application US 97900894 Cont of application US 2000629475 Cont of application US 2000733734 Cont of application US 2001903926 CIP of patent US 5897605 CIP of patent US 5901171 CIP of patent US 6041280 Cont of patent US 6125325 Cont of patent US 6236937 Cont of patent US 6292749 CIP of patent US 6393046 Cont of patent US 6421609
US 6574558	B2		G06F-165/00	CIP of application US 96637457 CIP of application US 96637537 CIP of application US 96638021 CIP of application US 96638882 Provisional application US 9624260 Provisional application US 9626304 CIP of application US 97846067 Cont of application US 97900894 Cont of application US 2000629475 Cont of application US 2000733734 Cont of application US 2001903926 CIP of patent US 5897605 CIP of patent US 5901171 CIP of patent US 6041280 Cont of patent US 6125325 Cont of patent US 6236937 Cont of patent US 6292749 CIP of patent US 6393046 Cont of patent US 6421609

Abstract (Basic): US 20020143467 A1

NOVELTY - The data collector obtains information related to

horizontal track, cross-track and travel time of each vehicle using GPS satellites. A calculator estimates the altitude data with respect to each track which is processed along with the collected information to identify the vehicle location.

DETAILED DESCRIPTION - An INDEPENDENT CLAIM is included for GPS receiver operation method.

USE - For determining position of vehicle such as car, truck, etc., using GPS satellites for terrestrial navigation system .

ADVANTAGE - Ensures obtaining travel distance information directly due to separate collection of horizontal and cross-track information using single satellite. Ensures exact position detection due to minimized cross-track error.

DESCRIPTION OF DRAWING(S) - The figure shows a block diagram of GPS car navigation system .

pp; 37 DwgNo 2/15

Title Terms: GROUP ; BASED; VEHICLE; POSITION; DETECT; SYSTEM; TERRESTRIAL ; NAVIGATION; ESTIMATE; ALTITUDE; DATA; RESPECT; HORIZONTAL; CROSS; TRACK ; COLLECT; INFORMATION; IDENTIFY; VEHICLE; LOCATE

Derwent Class: S02; T01; W06; X22

International Patent Class (Main): G01C-021/26; G06F-165/00

File Segment: EPI

19/5/19 (Item 10 from file: 350)

DIALOG(R) File 350:Derwent WPIX

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014931871 \*\*Image available\*\*

WPI Acc No: 2002-752580/200282

XRPX Acc No: N02-592659

Server for navigation system , has downloading application to download pre-computed data parcels corresponding to serviced geographical area from database to client based on request

Patent Assignee: NAVIGATION TECHNOLOGIES CORP (NAVI-N); CRANE A (CRAN-I); NATESAN S (NATE-I); ROBARE P (ROBA-I)

Inventor: CRANE A; NATESAN S; ROBARE P

Number of Countries: 028 Number of Patents: 004

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
EP 1251335	A2	20021023	EP 2002252660	A	20020415	200282 B
US 20020169778	A1	20021114	US 2001838094	A	20010419	200282
JP 2003090735	A	20030328	JP 2002154729	A	20020419	200331
US 6691128	B2	20040210	US 2001838094	A	20010419	200413

Priority Applications (No.Type Date): US 2001838094 A 20010419

Patent Details:

Patent No Kind Lan Pg Main IPC Filing Notes

EP 1251335 A2 E 31 G01C-021/34

Designated States (Regional): AL AT BE CH CY DE DK ES FI FR GB GR IE IT  
LI LT LU LV MC MK NL PT RO SE SI TR

US 20020169778 A1 G06F-007/00

JP 2003090735 A 78 G01C-021/00

US 6691128 B2 G06F-017/30

Abstract (Basic): EP 1251335 A2

NOVELTY.- A serviced geographical region is divided into several pre-computed smaller sub areas. A database (22) stores several uniform-sized parcels including data that represent geographic features of sub areas. A downloadable application comprising applets, plug-ins or memory manager applications that run on the server (120),

downloads stored data parcels to client computing systems (140,150,160) based on request.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are included for the following:

- (1) Navigation system operation method;
- (2) Navigation system architecture; and
- (3) Memory resource management method.

USE - For providing navigation related services including map related data to client devices such as PC, PDA, portable phone, vehicle navigation system.

ADVANTAGE - The server supports different client computing platforms and provides the required geographical data to client effectively and easily. Since the pre-computed data parcels are of uniform size, the data can be managed easily by both server and client device, thereby ensuring effective connectivity.

DESCRIPTION OF DRAWING(S) - The figure shows a schematic view navigation system.

Database (22)  
Server (120)  
Client computing systems (140,150,160)

pp; 31 DwgNo 1/13

Title Terms: SERVE; NAVIGATION; SYSTEM; APPLY; PRE; COMPUTATION; DATA; PARCEL; CORRESPOND; SERVICE; GEOGRAPHICAL; AREA; DATABASE; CLIENT; BASED; REQUEST

Derwent Class: S02; T01; X22

International Patent Class (Main): G01C-021/00; G01C-021/34; G06F-007/00 ; G06F-017/30

International Patent Class (Additional): G06F-015/00 ; G08G-001/137

File Segment: EPI

19/5/20 (Item 11 from file: 350)

DIALOG(R)File 350:Derwent WPIX

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014470145 \*\*Image available\*\*

WPI Acc No: 2002-290848/200233

Related WPI Acc No: 2000-490114

XRPX Acc No: N02-227032

Computer usable medium for navigation systems , has internal language filters for selecting alternative names in different languages for geographical features represented by data records

Patent Assignee: ASHBY R A (ASHB-I); LAMPERT D S (LAMP-I)

Inventor: ASHBY R A; LAMPERT D S

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 6336111	B1	20020101	US 9819684	A	19980206	200233 B
			US 2000504976	A	20000215	

Priority Applications (No Type Date): US 9819684 A 19980206; US 2000504976 A 20000215

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
US 6336111	B1	18	G06F-017/30	Cont of application US 9819684	
				Cont of patent US 6081803	

Abstract (Basic): US 6336111 B1

NOVELTY - Internal language filters are associated with the parcels including a portion of the data records. Internal language filters

Main International Patent Class: G06F-017/60

Fulltext Availability:

Detailed Description

Detailed Description

... Thus, the system may provide a taxonomic broadcast of bid/ask information that may be **navigated** by navlets, or used by other application programs for database injection to provide a useful and economical way to search and/or **index** bid/ask information. The SNAP or application layer frame may use the source and destination...

...see figure 10, to encapsulate UDP packets where the pseudoheader is encoded - 25 with taxonomy, **geography**, flags and other meta- **data** type information for the UDP data payload to create SNAP frames for use by the

...

19/3,K/32 (Item 20 from file: 349)

DIALOG(R) File 349:PCT FULLTEXT

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00784185 \*\*Image available\*\*

A SYSTEM AND METHOD FOR STREAM-BASED COMMUNICATION IN A COMMUNICATION

SERVICES PATTERNS ENVIRONMENT

SYSTEME, PROCEDE ET ARTICLE DE PRODUCTION FOURNISANT UN SYSTEME DE  
COMMUNICATION EN CONTINU DANS UN ENVIRONNEMENT DE CONFIGURATIONS DE  
SERVICES DE COMMUNICATION

Patent Applicant/Assignee:

ACCENTURE LLP, 1661 Page Mill Road, Palo Alto, CA 94304, US, US  
(Residence), US (Nationality)

Inventor(s):

BOWMAN-AMUAH Michel K, 6426 Peak Vista Circle, Colorado Springs, CO 80918  
, US,

Legal Representative:

HICKMAN Paul L (agent), Hickman Coleman & Hughes, LLP, P.O. Box 52037,  
Palo Alto, CA 94303-0746, US,

Patent and Priority Information (Country, Number, Date):

Patent: WO 200117195 A2-A3 20010308 (WO 0117195)

Application: WO 2000US24125 20000831 (PCT/WO US0024125)

Priority Application: US 99386717 19990831

Designated States: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU CZ  
DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ  
LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG  
SI SK SL TJ TM TT TZ UA UG UZ VN YU ZA ZW  
(EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE  
(OA) BF BJ CF CI CM GA GN GW ML MR NE SN TD TG  
(AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZW  
(EA) AM AZ BY KG KZ MD RU TJ TM

Publication Language: English

Filing Language: English

Fulltext Word Count: 150532

International Patent Class: G06F-017/22 ...

Fulltext Availability:

Detailed Description

Detailed Description

... varying data types, such as text, graphics, and audio. These services also provide support for **navigation** within and across documents no

matter where they are located, through the use of links...

...for large, complex, and highlystructured documents that are subject to frequent revisions, such as dictionaries, **indexes**, computer manuals, and corporate telephone directories.

HTML: SGML for dummies?

While creating the World Wide...such payroll, billing, etc. and can also include report generation. This is an often overlooked **area** in client/server architectures.

to Traditional client/server solutions and Netcentric solutions often require batch...

**19/3,K/33 (Item 21 from file: 349)**

DIALOG(R) File 349:PCT FULLTEXT  
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00784184 \*\*Image available\*\*

**A SYSTEM, METHOD FOR FIXED FORMAT STREAM COMMUNICATION IN A COMMUNICATION SERVICES PATTERNS ENVIRONMENT**

**SYSTEME, PROCEDE ET ARTICLE POUR FLUX DE FORMAT FIXE DANS UN ENVIRONNEMENT A CONFIGURATIONS DE SERVICES DE COMMUNICATION**

Patent Applicant/Assignee:

ACCENTURE LLP, 1661 Page Mill Road, Palo Alto, CA 94304, US, US  
(Residence), US (Nationality)

Inventor(s):

BOWMAN-AMUAH Michel K, 6426 Peak Vista Circle, Colorado Springs, CO 80918  
, US,

Legal Representative:

HICKMAN Paul L (agent), Oppenheimer Wolff & Donnelly LLP, P.O. Box 52037,  
Palo Alto, CA 94303-0746, US,

Patent and Priority Information (Country, Number, Date):

Patent: WO 200117194 A2-A3 20010308 (WO 0117194)

Application: WO 2000US24114 20000831 (PCT/WO US0024114)

Priority Application: US 99386430 19990831

Designated States: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU CZ  
DE DK DZ EE ES FI GB GE GH GM HR HU ID IL IS JP KE KG KP KR KZ LC LK LR  
LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL  
TJ TM TR TT UA UG UZ VN YU ZA ZW  
(EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE  
(OA) BF BJ CF CG CI CM GA GN GW ML MR NE SN TD TG  
(AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZW  
(EA) AM AZ BY KG KZ MD RU TJ TM

Publication Language: English

Filing Language: English

Fulltext Word Count: 149954

International Patent Class: G06F-017/22 ...

Fulltext Availability:

Claims

Claim

... has shown that it is necessary to find individuals that specialize in one of these **areas** to leverage across a large team. The key is obtaining the right balance of technology...which can transform documents into HTML) make it possible to leverage the web server's **index** server to locate artifacts from various locations. This practice is being more widely adopted, as...

**19/3,K/34 (Item 22 from file: 349)**

DIALOG(R) File 349:PCT FULLTEXT

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00777022

**A SYSTEM, METHOD AND ARTICLE OF MANUFACTURE FOR AN E-COMMERCE BASED**

**ARCHITECTURE**

**SYSTEME, PROCEDE ET ARTICLE DE PRODUCTION POUR UNE ARCHITECTURE BASEE SUR  
LE COMMERCE ELECTRONIQUE**

Patent Applicant/Assignee:

AC PROPERTIES BV, Parkstraat 83, NL-2514 JG 'S Gravenhage, NL, NL  
(Residence), NL (Nationality), (For all designated states except: US)

Patent Applicant/Inventor:

UNDERWOOD Roy A, 4436 Hearthmoor Court, Long Grove, IL 60047, US, US  
(Residence), US (Nationality), (Designated only for: US)

Legal Representative:

HICKMAN Paul L (et al) (agent), Hickman Coleman & Hughes, LLP, P.O. Box  
52037, Palo Alto, CA 94303-0746, US,

Patent and Priority Information (Country, Number, Date):

Patent: WO 200109794 A2-A3 20010208 (WO 0109794)

Application: WO 2000US20704 20000728 (PCT/WO US0020704)

Priority Application: US 99364734 19990730

Designated States: AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES  
FI GB GE GH GM HR HU ID IL IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD  
MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG US  
UZ VN YU ZW

(EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE

(OA) BF BJ CF CG CI CM GA GN GW ML MR NE SN TD TG

(AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZW

(EA) AM AZ BY KG KZ MD RU TJ TM

Publication Language: English

Filing Language: English

Fulltext Word Count: 122424

...International Patent Class: G06F-017/30 ...

... G06F-017/60

Fulltext Availability:

Detailed Description

Detailed Description

... Navigation Services within the Web Browser provide a user with a way  
to access or navigate between functions within or across applications  
. These User Navigation Services can be subdivided into three  
categories.

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menus.

Virtual Reality - A virtual reality or...

**19/3,K/35 (Item 23 from file: 349)**

DIALOG(R) File 349:PCT FULLTEXT

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00777020

**A SYSTEM, METHOD AND ARTICLE OF MANUFACTURE FOR RESOURCE ADMINISTRATION IN**

**AN E-COMMERCE TECHNICAL ARCHITECTURE  
SYSTEME, PROCEDE ET ARTICLE MANUFACTURE POUR L'ADMINISTRATION DE RESSOURCES  
DANS UNE ARCHITECTURE TECHNIQUE DE COMMERCE ELECTRONIQUE**

Patent Applicant/Assignee:

ACCENTURE LLP, Parkstraat 83, NL-2514 JG 'S Gravenhage, NL, NL  
(Residence), NL (Nationality), (For all designated states except: US)

Patent Applicant/Inventor:

UNDERWOOD Roy A, 4436 Hearthmoor Court, Long Grove, IL 60047, US, US  
(Residence), US (Nationality), (Designated only for: US)

Legal Representative:

HICKMAN Paul L (agent), Oppenheimer Wolff & Donnelly, LLP, P.O. Box  
52037, Palo Alto, CA 94303-0746, US,

Patent and Priority Information (Country, Number, Date):

Patent: WO 200109791 A2-A3 20010208 (WO 0109791)

Application: WO 2000US20547 20000728 (PCT/WO US0020547)

Priority Application: US 99364161 19990730

Designated States: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU CZ  
DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ  
LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG  
SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW  
(EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE  
(OA) BF BJ CF CG CI CM GA GN GW ML MR NE SN TD TG  
(AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZW  
(EA) AM AZ BY KG KZ MD RU TJ TM

Publication Language: English

Filing Language: English

Fulltext Word Count: 136396

...International Patent Class: G06F-017/60

Fulltext Availability:

Detailed Description

Detailed Description

... system.

Form

Description

211

Form Services enable applications to use fields to display and collect  
**data**. Form Services provide support for: Display, Mapping Support, and  
Field Interaction Management.

ReTA implementation

ReTA...user to walk around in.

ReTA implementation

ReTA implements the Hyperlink functionality of web browser Navigation  
Services through the ReTA UI framework.

Window System

Description

Typically part of the operating system, the Window System Services  
provide the base functionality...

19/3,K/36 (Item 24 from file: 349)

DIALOG(R) File 349:PCT FULLTEXT

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00777017

A SYSTEM, METHOD AND ARTICLE OF MANUFACTURE FOR A HOST FRAMEWORK DESIGN IN

**AN E-COMMERCE ARCHITECTURE  
SYSTEME, PROCEDE ET ARTICLE DE PRODUCTION DESTINES A LA CONCEPTION D'UNE  
STRUCTURE D'ORDINATEUR CENTRAL DANS UNE ARCHITECTURE DE COMMERCE  
ELECTRONIQUE**

Patent Applicant/Assignee:

ACCENTURE LLP, 1661 Page Mill Road, Palo Alto, CA 94304, US, US  
(Residence), US (Nationality), (For all designated states except: US)

Patent Applicant/Inventor:

UNDERWOOD Roy A, 4436 Hearthmoor Court, Long Grove, IL 60047, US, US  
(Residence), US (Nationality), (Designated only for: US)

Legal Representative:

HICKMAN Paul L (agent), Oppenheimer Wolff & Donnelly, LLP, 38th Floor,  
2029 Century Park East, Los Angeles, CA 90067-3024, US,

Patent and Priority Information (Country, Number, Date):

Patent: WO 200109752 A2-A3 20010208 (WO 0109752)

Application: WO 2000US20560 20000728 (PCT/WO US0020560)

Priority Application: US 99364733 19990730

Designated States: AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES  
FI GB GE GH GM HR HU ID IL IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD  
MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG US  
UZ VN YU ZW

(EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE

(OA) BF BJ CF CG CI CM GA GN GW ML MR NE SN TD TG

(AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZW

(EA) AM AZ BY KG KZ MD RU TJ TM

Publication Language: English

Filing Language: English

Fulltext Word Count: 122613

...International Patent Class: G06F-017/30 ...

... G06F-017/60

Fulltext Availability:

Detailed Description

Detailed Description

... Form Services within the Web Browser enable applications to use fields  
to display and collect **data**. The only difference is the technology used  
to develop the Forms. The most common type...

19/3,K/37 (Item 25 from file: 349)

DIALOG(R) File 349:PCT FULLTEXT

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00777016

A SYSTEM, METHOD AND ARTICLE OF MANUFACTURE FOR MAINTAINING DATA IN AN  
E-COMMERCE BASED TECHNICAL ARCHITECTURE  
SYSTEME, PROCEDE ET ARTICLE MANUFACTURE DE MAINTIEN DES DONNEES DANS UNE  
ARCHITECTURE TECHNIQUE DE COMMERCE ELECTRONIQUE

Patent Applicant/Assignee:

ACCENTURE LLP, 1661 Page Mill Road, Palo Alto, CA 94304, US, US  
(Residence), US (Nationality), (For all designated states except: US)

Patent Applicant/Inventor:

UNDERWOOD Roy A, 4436 Hearthmoor Court, Long Grove, IL 60047, US, US  
(Residence), US (Nationality), (Designated only for: US)

Legal Representative:

HICKMAN Paul L (agent), Oppenheimer Wolff & Donnelly LLP, 1400 Page Mill  
Road, Palo Alto, CA 94304, US,

Patent and Priority Information (Country, Number, Date):

Patent: WO 200109751 A2 20010208 (WO 0109751)  
Application: WO 2000US20546 20000728 (PCT/WO US0020546)  
Priority Application: US 99364535 19990730  
Designated States: AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CU CZ DE DK DZ EE ES FI GB GE GH GM HR HU ID IL IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG US UZ VN YU ZW  
(EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE  
(OA) BF BJ CF CG CI CM GA GN GW ML MR NE SN TD TG  
(AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZW  
(EA) AM AZ BY KG KZ MD RU TJ TM

Publication Language: English

Filing Language: English

Fulltext Word Count: 124205

Main International Patent Class: G06F-017/60

Fulltext Availability:

Claims

Claim

... data retrieval. In relational databases one or more fields can be used to construct the **index**. So when a user searches for a specific record, rather than scanning the whole table sequentially the **index** is used to find the location of that record faster.

ReTA implementation

ReTA implements Database...VB Script, JavaScript).

ReTA implementation

ReTA implements Form Services through the NT 4.0 operating **system**, Internet Explorer 4.0 and Netscape **Navigator** 4 ReTA supports creating Internet objects and the JavaScripts used by the browsers with...

...Navigation Services within the Web Browser provide a user with a way to access or **navigate** between functions within or across **applications**. These User **Navigation** Services can be subdivided into three categories:

213

menus. Virtual Reality - A virtual reality or...

...user to walk around in.

ReTA implementation

ReTA implements the Hyperlink functionality of web browser **Navigation** Services through the ReTA UI framework.

Window **System**

Description

Typically part of the operating system, the Window System Services provide the base functionality...isolate the Business Logic from the technical specifics of how information is stored (e.g., **location** transparency, RDBMS syntax, etc.). **Data** Abstraction provides the application with a more logical view of information, further insulating the application...

19/3,K/38 (Item 26 from file: 349)

DIALOG(R) File 349:PCT FULLTEXT

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00761430 \*\*Image available\*\*

SYSTEM, METHOD AND COMPUTER PROGRAM FOR REPRESENTING PRIORITY INFORMATION CONCERNING COMPONENTS OF A SYSTEM

SYSTEME, METHODE ET ARTICLE FABRIQUE PERMETTANT DE CLASSEZ PAR ORDRE DE

**PRIORITE DES COMPOSANTS D'UNE STRUCTURE DE RESEAU NECESSAIRES A LA MISE  
EN OEUVRE D'UNE TECHNIQUE**

**Patent Applicant/Assignee:**

ANDERSEN CONSULTING LLP, 100 South Wacker Drive, Chicago, IL 60606, US,  
US (Residence), US (Nationality)

**Inventor(s):**

GUHEEN Michael F, 2218 Mar East Street, Tiburon, CA 94920, US,  
MITCHELL James D, 3004 Alma, Manhattan Beach, CA 90266, US,  
BARRESE James J, 757 Pine Avenue, San Jose, CA 95125, US,

**Legal Representative:**

BRUESS Steven C (agent), Merchant & Gould P.C., P.O. Box 2903,  
Minneapolis, MN 55402-0903, US,

**Patent and Priority Information (Country, Number, Date):**

Patent: WO 200073956 A2-A3 20001207 (WO 0073956)  
Application: WO 2000US14406 20000524 (PCT/WO US0014406)  
Priority Application: US 99321274 19990527

Designated States: AE AG AL AM AT (utility model) AT AU AZ BA BB BG BR BY  
CA CH CN CR CU CZ (utility model) CZ DE (utility model) DE DK (utility  
model) DK DM DZ EE (utility model) EE ES FI (utility model) FI GB GD GE  
GH GM HR HU ID IL IN IS JP KE KG KP KR (utility model) KR KZ LC LK LR LS  
LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK  
(utility model) SK SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW  
(EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE  
(OA) BF BJ CF CG CI CM GA GN GW ML MR NE SN TD TG  
(AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZW  
(EA) AM AZ BY KG KZ MD RU TJ TM

Publication Language: English

Filing Language: English

Fulltext Word Count: 149024

Main International Patent Class: G06F-017/60

Fulltext Availability:

Detailed Description

Detailed Description

... solutions and current tools that assist and automate management  
solutions.

Cautions and Caveats

Unlike the Application and Execution Architectures, every function of  
the Operations Architecture must be reviewed. All components of...

**19/3,K/39 (Item 27 from file: 349)**

DIALOG(R) File 349:PCT FULLTEXT

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00401842 \*\*Image available\*\*

**APPARATUS AND METHOD FOR MANAGING AND DISTRIBUTING DESIGN AND MANUFACTURING  
INFORMATION THROUGHOUT A SHEET METAL PRODUCTION FACILITY**

**APPAREIL ET METHODE CORRESPONDANTE PERMETTANT DE GERER ET DE REPARTIR UNE  
INFORMATION RELATIVE A LA CONCEPTION ET A LA FABRICATION DANS UNE  
INSTALLATION DE PRODUCTION DE TOLES**

**Patent Applicant/Assignee:**

AMADA METRECS CO LTD,  
AMADASOFT AMERICA INC,

**Inventor(s):**

HAZAMA Kensuke,  
KASK Kallev,  
SAKAI Satoshi,

SUBBARAMAN Anand Hariharan,  
Patent and Priority Information (Country, Number, Date):  
Patent: WO 9742586 A1 19971113  
Application: WO 97US7471 19970506 (PCT/WO US9707471)  
Priority Application: US 9616958 19960506; US 96690671 19960731  
Designated States: AT BE CH DE DK ES FI FR GB GR IE IT LU MC NL PT SE  
Publication Language: English  
Fulltext Word Count: 146782  
Main International Patent Class: G06F-017/50  
Fulltext Availability:  
Detailed Description

Detailed Description

... In accordance with an aspect of the present invention, the 3-D manipulation and 20 **navigation system** may be provided at the station modules and/or server module of the facility.

The...hardware components and interfaces may also be provided in order to implemerit the 3-D **navigation system** of the present invention. For example, the **software** used to implement the system may be provided or reside in the computer or personal...

DESIGNATED STATES: BE; DE; FR; GB; IT  
INTERNATIONAL PATENT CLASS: G06F-017/00 ; G08G-001/0968; G01C-021/20  
ABSTRACT WORD COUNT: 175

NOTE:

Figure number on first page: 1

LANGUAGE (Publication,Procedural,Application): English; English; English  
FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS B	(English)	200035	1462
CLAIMS B	(German)	200035	1451
CLAIMS B	(French)	200035	1646
SPEC B	(English)	200035	4555
Total word count - document A			0
Total word count - document B			9114
Total word count - documents A + B			9114

INTERNATIONAL PATENT CLASS: G06F-017/00 ...

19/3,K/13 (Item 1 from file: 349)  
DIALOG(R) File 349:PCT FULLTEXT  
(c) 2004 WIPO/Univentio. All rts. reserv.

01080910 \*\*Image available\*\*

POSITION REFERENCED MULTIMEDIA AUTHORING AND PLAYBACK  
CREATION ET LECTURE DE DONNEES MULTIMEDIA A POSITION REFERENCEE

Patent Applicant/Assignee:

INOVAS LIMITED, Catrine Suite, 1 Glenbervie, Glenbervie Business Park,  
Larbert, Falkirk FK5 4RB, GB, GB (Residence), GB (Nationality), (For  
all designated states except: US)

Patent Applicant/Inventor:

WILLIAMSON Howard, Balmuzier Farm, Balmuzier Road, Slamannan, Falkirk FK1  
3EW, GB, GB (Residence), GB (Nationality), (Designated only for: US)

Legal Representative:

KENNEDYS PATENT AGENCY LIMITED (agent), Floor 5, Queens House, 29 St.  
Vincent Place, Glasgow G1 2DT, GB,

Patent and Priority Information (Country, Number, Date):

Patent: WO 200403788 A2 20040108 (WO 0403788)  
Application: WO 2003GB2794 20030630 (PCT/WO GB2003002794)  
Priority Application: GB 200215217 20020629

Designated States: AE AG AL AM AT (utility model) AT AU AZ BA BB BG BR BY  
BZ CA CH CN CO CR CU CZ (utility model) CZ DE (utility model) DE DK  
(utility model) DK DM DZ EC EE (utility model) EE ES FI GB GD GE GH GM HR  
HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW  
MX MZ NO NZ OM PH PL PT RO RU SC SD SE SG SK (utility model) SK SL TJ TM  
TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW  
(EP) AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IT LU MC NL PT RO SE  
SI SK TR  
(OA) BF BJ CF CG CI CM GA GN GQ GW ML MR NE SN TD TG  
(AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZM ZW  
(EA) AM AZ BY KG KZ MD RU TJ TM

Publication Language: English

Filing Language: English

Fulltext Word Count: 7751

Main International Patent Class: G06F-017/30

Fulltext Availability:

Detailed Description

Detailed Description

... through an interface to a GPS receiver.

Time synchronisation provides direct correlation of GPS position data with the video recording.

Location based video playback ( spatial video browsing) and map location navigation systems have been developed, such as Visi-Data from Roadware Group Inc. Ontario, Canada, that allow users to navigate by-viewing a map on screen and...

19/3,K/14 (Item 2 from file: 349)

DIALOG(R)File 349:PCT FULLTEXT  
(c) 2004 WIPO/Univentio. All rts. reserv.

00963611 \*\*Image available\*\*  
EXTENDED WEB ENABLED MULTI-FEATURED BUSINESS TO BUSINESS COMPUTER SYSTEM  
FOR RENTAL VEHICLE SERVICES  
SYSTEME INFORMATIQUE INTERENTREPRISES A ELEMENTS MULTIPLES A ACCES INTERNET  
POUR SERVICES DE LOCATION DE VEHICULES

Patent Applicant/Assignee:

THE CRAWFORD GROUP INC, 600 Corporate Park Drive, St. Louis, MO 63105, US  
, US (Residence), US (Nationality), (For all designated states except:  
US)

Patent Applicant/Inventor:

WEINSTOCK Timothy Robert, 1845 Highcrest Drive, St. Charles, MO 63303, US  
, US (Residence), US (Nationality), (Designated only for: US)

DE VALLANCE Kimberly Ann, 2037 Silent Spring Drive, Maryland Heights, MO  
63043, US, US (Residence), US (Nationality), (Designated only for: US)

HASELHORST Randall Allan, 1016 Scenic Oats Court, Imperial, MO 63052, US,  
US (Residence), US (Nationality), (Designated only for: US)

KENNEDY Craig Stephen, 9129 Meadowglen Lane, St. Louis, MO 63126, US, US  
(Residence), US (Nationality), (Designated only for: US)

SMITH David Gary, 10 Venice Place Court, Wildwood, MO 63040, US, US  
(Residence), US (Nationality), (Designated only for: US)

TINGLE William T, 17368 Hilltop Ridge Drive, Eureka, MO 63025, US, US  
(Residence), US (Nationality), (Designated only for: US)

KLOPFENSTEIN Anita K, 433 Schwarz Road, O'Fallon, IL 62269, US, US  
(Residence), US (Nationality), (Designated only for: US)

Legal Representative:

HAFERKAMP Richard E (et al) (agent), Howell & Haferkamp, L.C., Suite  
1400, 7733 Forsyth Blvd., St. Louis, MO 63105-1817, US,

Patent and Priority Information (Country, Number, Date):

Patent: WO 200297700 A2 20021205 (WO 0297700)

Application: WO 2001US51431 20011019 (PCT/WO US0151431)

Priority Application: US 2000694050 20001020

Parent Application/Grant:

Related by Continuation to: US 2000694050 20001020 (CIP)

Designated States: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU  
CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP  
KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PH PL PT RO RU  
SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW  
(EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR  
(OA) BF BJ CF CG CI CM GA GN GQ GW ML MR NE SN TD TG  
(AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZW  
(EA) AM AZ BY KG KZ MD RU TJ TM

Publication Language: English

Filing Language: English

Fulltext Word Count: 237932

Main International Patent Class: G06F-017/60

19/3,K/15 (Item 3 from file: 349)  
DIALOG(R) File 349:PCT FULLTEXT  
(c) 2004 WIPO/Univentio. All rts. reserv.

00939331 \*\*Image available\*\*

**SCHEMA-BASED SERVICES FOR IDENTITY-BASED DATA ACCESS**  
**SERVICES A BASE DE SCHEMA POUR ACCES A DES DONNEES A BASE D'IDENTITE**  
Patent Applicant/Assignee:

MICROSOFT CORPORATION, One Microsoft Way, Redmond, WA 98052, US, US  
(Residence), US (Nationality)

Inventor(s):

LUCOVSKY Mark H, 811 Windsor Drive SE, Sammamish, WA 98074, US,  
PIERCE Shaun Douglas, 24515 NE 11th Place, Sammamish, WA 98074, US,  
MOVVA Ramu, 25131 SE 42nd Street, Issaquah, WA 98029, US,  
KALKI Jagadeesh, 2336, 175th CT NE, Redmond, WA 98052, US,  
AUERBACH David Benjamin, Apartment 302, 155 Aloha Street, Seattle, WA  
98109, US,  
FORD Peter Sewall, 31422 NE 108th Street, Carnation, WA 98014, US,  
YUAN Yun-Qi, 2128 179th CT NE, Redmond, WA 98052, US,  
GUU Yi-Wen, 14583 NE 58th Street, Bellevue, WA 98007, US,  
GEORGE Samuel John, 146 16th Avenue, San Mateo, CA 94402, US,  
HOFFMAN William Raymond, 1414 Stannage Avenue, Berkeley, CA 94702, US,  
JACOBS Jay Christopher, 5 Woodside Court, Danville, CA 94506, US,  
STECKLER Paul Andrew, 2115 187th Avenue NE, Redmond, WA 98052, US,  
HSUEH Walter C, 4202 Sophia Way, San Jose, CA 95134, US,  
KEIL Kendall D, 19110 33rd Avenue SE, Bothell, WA 98012, US,  
GOPAL Burra, 13925 180th Avenue NE, Redmond, WA 98052-1218, US,  
WHITE Steven D, 6122 144th PI SE, Bellevue, WA 98006, US,  
LEACH Paul J, 1134 Federal Avenue East, Seattle, WA 98102, US,  
WARD Richard B, 8565 261st Avenue NE, Redmond, WA 98053-5833, US,  
SMOOT Philip Michael, 330 Arlington Street, San Francisco, CA 94131, US,

Legal Representative:

MICHALIK Albert S (agent), Suite 193, 704-228th Avenue NE, Sammamish, WA  
98074, US,

Patent and Priority Information (Country, Number, Date):

Patent: WO 200273472 A1 20020919 (WO 0273472)  
Application: WO 2002US7953 20020314 (PCT/WO US0207953)

Priority Application: US 2001275809 20010314; US 200117680 20011022

Designated States: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU  
CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP  
KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ OM PH PL PT RO  
RU SD SE SG SI SK SL TJ TM TN TR TT TZ UA UG UZ VN YU ZA ZM ZW  
(EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR  
(OA) BF BJ CF CG CI CM GA GN GQ GW ML MR NE SN TD TG  
(AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZM ZW  
(EA) AM AZ BY KG KZ MD RU TJ TM

Publication Language: English

Filing Language: English

Fulltext Word Count: 115907

Main International Patent Class: G06F-017/30

Fulltext Availability:

Detailed Description

Detailed Description

... this end, the present invention is generally directed to schema-based services that maintain user, group, corporate or other entity - 8 data

in a commonly accessible virtual location , such as the Internet. The present invention is intended to scale to millions of users...

19/3,K/16 (Item 4 from file: 349)

DIALOG(R) File 349:PCT FULLTEXT  
(c) 2004 WIPO/Univentio. All rts. reserv.

00933152 \*\*Image available\*\*  
**EXTENDED WEB ENABLED MULTI-FEATURED BUSINESS TO BUSINESS COMPUTER SYSTEM FOR RENTAL VEHICLE SERVICES**  
**SYSTEME INFORMATIQUE ETENDU ENTRE ENTREPRISES, A FONCTIONS MULTIPLES, FONCTIONNANT SUR LE WEB, POUR DES SERVICES DE LOCATION DE VEHICULES**

**Patent Applicant/Assignee:**

THE CRAWFORD GROUP INC, 600 Corporate Park Drive, St. Louis, MO 63105, US , US (Residence), US (Nationality), (For all designated states except: US)

**Patent Applicant/Inventor:**

WEINSTOCK Timothy Robert, 1845 Highcrest Drive, St. Charles, MO 63303, US , US (Residence), US (Nationality), (Designated only for: US)

DE VALLANCE Kimberly Amm, 2037 Silent Spring Drive, Maryland Heights, MO 63043, US, US (Residence), US (Nationality), (Designated only for: US)

HASELHORST Randall Allan, 1016 Scenic Oats Court, Imperial, MO 63052, US, US (Residence), US (Nationality), (Designated only for: US)

KENNEDY Craig Stephen, 9129 Meadowglen Lane, St. Louis, MO 63126, US, US (Residence), US (Nationality), (Designated only for: US)

SMITH David Gary, 10 Venice Place Court, Wildwood, MO 63040, US, US (Residence), US (Nationality), (Designated only for: US)

TINGLE William T, 17368 Hilltop Ridge Drive, Eureka, MO 63025, US, US (Residence), US (Nationality), (Designated only for: US)

KLOPFENSTEIN Anita K, 433 Schwarz Road, O'Fallon, IL 62269, US, US (Residence), US (Nationality), (Designated only for: US)

**Legal Representative:**

HAFERKAMP Richard E (et al) (agent), HOWELL & HAFERKAMP, L.C., Suite 1400, 7733 Forsyth Blvd., St. Louis, MO 63105-1817, US,

**Patent and Priority Information (Country, Number, Date):**

Patent: WO 200267175 A2 20020829 (WO 0267175)

Application: WO 2001US51437 20011019 (PCT/WO US0151437)

Priority Application: US 2000694050 20001020

**Parent Application/Grant:**

Related by Continuation to: US 2000694050 20001020 (CIP)

Designated States: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PH PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW (EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR (OA) BF BJ CF CG CI CM GA GN GQ GW ML MR NE SN TD TG (AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZW (EA) AM AZ BY KG KZ MD RU TJ TM

Publication Language: English

Filing Language: English

Fulltext Word Count: 243912

Main International Patent Class: G06F-017/60

Fulltext Availability:

Detailed Description

Detailed Description

... parent's invention with its GUI interface allows a user to point and click to navigate and to make selections by pull down selection, thereby reducing

errors. As users become more...with the current record's key Lcatedated with the Transmission Group Start record format's GROUP CONTROL ID and )UP TYPE CODE, and the Transmission Group 's Set Start record format's CUSTOMER LNSACTION ID,, and,  
IF the ARMS Cross -Reference File record was retrieved successfully, its MOR TRANSACTION ID value. I  
C..For each record format read that is not a Transmission, Group , or Set  
Lrt/End record format,  
If the group transaction type is not I ER...structure purposes). This may require an exclusive lock.  
Location (via an API or ILE RPG pointers ) to wait less than 5 seconds, then ittempt until successful locking for input and writing...

19/3,K/17 (Item 5 from file: 349)  
DIALOG(R)File 349:PCT FULLTEXT  
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00912667 \*\*Image available\*\*  
WEATHER INFORMATION DELIVERY SYSTEM AND METHODS PROVIDING PLANNING  
FUNCTIONALITY AND NAVIGATIONAL TOOLS  
SYSTEME ET PROCEDES DE DIFFUSION D'INFORMATIONS METEOROLOGIQUES OFFRANT UNE  
POSSIBILITE DE PLANIFICATION ET DES OUTILS DE NAVIGATION

Patent Applicant/Assignee:

THE WEATHER CHANNEL, 300 Interstate North Parkway, Atlanta, GA 30339, US,  
US (Residence), US (Nationality)

Inventor(s):

FENNELL Jody H, 2753 Twin Leaf Trail, Marietta, GA 30062, US,  
RYAN Mark P, 10 Sherman Lane, Cartersville, GA 30121, US,  
PEARSON Joseph A, 4294 Hathaway Court, Kennesaw, GA 30144, US,

Legal Representative:

PRATT John S (et al) (agent), KILPATRICK STOCKTON LLP, 1100 Peachtree  
Street, Suite 2800, Atlanta, GA 30309-4530, US,

Patent and Priority Information (Country, Number, Date):

Patent: WO 200246797 A2-A3 20020613 (WO 0246797)  
Application: WO 2001US46790 20011205 (PCT/WO US01046790)  
Priority Application: US 2000254211 20001208; US 2001766295 20010119

Designated States: BR CA MX

(EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR

Publication Language: English

Filing Language: English

Fulltext Word Count: 18499

Main International Patent Class: G06F-017/30

Fulltext Availability:

Detailed Description

Detailed Description

... climatology, through "My Weather" or in planning for other types of activities in the geographical division , such as travel.

I 0

IX. EXENTLARY CONSUMER NAVIGATION

The invention has been described above with reference to various tools, navigators, presentation components, content areas , linkage , interfaces, and planning functionality. An example will now be given of a consumer's possible...

19/3,K/18 (Item 6 from file: 349)

DIALOG(R) File 349:PCT FULLTEXT

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00905289 \*\*Image available\*\*

ROUTE DATA BASE GENERATION PROCEDURES AND SYSTEMS, PROCESSES AND PRODUCTS  
RELATING THERETO

SYSTEMES ET PROCEDURES DE GENERATION DE BASE DE DONNEES DE ROUTES, ET  
PROCEDES ET PRODUITS ASSOCIES

Patent Applicant/Inventor:

MARTIN Roger L, 908 Sylvia Drive, Deltona, FL 32725, US, US (Residence),  
US (Nationality)

SASSER Thurman, Unit 525, 3781 North Citrum Circle, zellwood, FL 32798,  
US, US (Residence), US (Nationality)

Legal Representative:

YEAGER Arthur G (et al) (agent), Suite 1305, 112 West Adams Street,  
Jacksonville, FL 32202-3853, US,

Patent and Priority Information (Country, Number, Date):

Patent: WO 200239367 A1 20020516 (WO 0239367)

Application: WO 2000US30855 20001110 (PCT/WO US0030855)

Priority Application: WO 2000US30855 20001110

Designated States: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU CZ  
DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ  
LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG  
SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW  
(EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR  
(OA) BF BJ CF CI CM GA GN GW ML MR NE SN TD TG  
(AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZW  
(EA) AM AZ BY KG KZ MD RU TJ TM

Publication Language: English

Filing Language: English

Fulltext Word Count: 16270

International Patent Class: G06F-017/30

Fulltext Availability:

Claims

Claim

... is characteristic of the change in headings between substantially all  
of the other interconnected adjacent **segments** in the serial order.

30 A **navigation system** for vehicles traversing area routes having  
impaired reception of **navigational signals** emanating from satellites  
associated with a global positioning **system** and where the vehicle has  
means with movements equatable to changes in the vehicle heading...said  
area route, and means for determining the coordinates at the opposite  
ends of said **segments**.

36 A **navigation system** for a vehicle traversing an area route having  
impaired reception of **navigational signals** emanating from  
satellites associated with a global positioning **system** and where the  
vehicle has means with movements equatable to changes in the vehicle  
heading...

...system for generating a data base of a route in an area where reception  
of **navigational signals** emanating from satellites associated with a  
global positioning **system** are obstructed comprising: an assembly having  
a pair of rotatable components that are **spaced** apart in ground contact  
and rotatable about a horizontal axis that is common to both...

...of the component@ and computer means responsive to the generation of said signals for generating **data** definitive of the **location** and orientation of **segments** of a route traversed by the assembly, said computer means having a storage facility for...

...base for a route traversable by a vehicle in an area having impaired reception of **navigational** signals emanating from satellites associated with a global positioning **system**, said data base having a route definition which is based on a **division** of the route into a plurality of linear **segments** that are interconnected and arranged in an end-to-end serial order and comprising: **data** definitive of the **area location** and orientation of the respective **segments** in said serial order, and data indicative of the time and date of entry into...

19/3,K/19 (Item 7 from file: 349)

DIALOG(R) File 349:PCT FULLTEXT  
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00886041 \*\*Image available\*\*

**NAVIGATOR**

**EXPLORATEUR**

**Patent Applicant/Assignee:**

BOXER TECHNOLOGIES AS, P.O.Box 370, N-1326 Lysaker, NO, NO (Residence),  
NO (Nationality), (For all designated states except: US)

**Patent Applicant/Inventor:**

LIE Haakon Thue, Husarveien 29, N-1396 Billingstad, NO, NO (Residence),  
NO (Nationality), (Designated only for: US)

HJERTVIKSTEN Rune, Bognesvn. 1a, N-4030 Stavanger, NO, NO (Residence),  
NO (Nationality), (Designated only for: US)

LOKKEN Atle, Norvald Frafjordsgrt. 1B, N-4041 Hafsfjord, NO, NO  
(Residence), NO (Nationality), (Designated only for: US)

OTTOSEN Stig, Skolevollen 20, N-4017 Stavanger, NO, NO (Residence), NO  
(Nationality), (Designated only for: US)

SUNDBY Henning, Skogsbakken 72, N-4319 Sandnes, NO, NO (Residence), NO  
(Nationality), (Designated only for: US)

**Legal Representative:**

BRYN & AARFLOT AS (agent), P.O. Box 449 Sentrum, N-0104 Oslo, NO,

**Patent and Priority Information (Country, Number, Date):**

Patent: WO 200219054 A2-A3 20020307 (WO 0219054)

Application: WO 2001NO353 20010830 (PCT/WO NO0100353)

Priority Application: US 2000229032 20000831

Designated States: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU  
CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP  
KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PH PL PT RO RU  
SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW  
(EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR  
(OA) BF BJ CF CG CI CM GA GN GQ GW ML MR NE SN TD TG  
(AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZW  
(EA) AM AZ BY KG KZ MD RU TJ TM

Publication Language: English

Filing Language: English

Fulltext Word Count: 7252

Main International Patent Class: G06F-017/30

**Fulltext Availability:**

Detailed Description

Claims

Detailed Description

... all content is tagged. The navigator area is linked to the content in the information **space** by a mapping function. Categories of experiences (e.g. learn, watch, do, be) are expressed in an orthogonal coordinate **system** and serves as basis for designing the **navigator area**, and thereby the **link** to the content in the information **space**. The navigator is always displayed in front of, and partly disengaged from, other **applications** running in the data processing **system**. The **navigator** can e.g. be used for accessing, publishing, and navigating in educational content.

According to...

Claim

... categories of experiences (e.g. learn, watch, do, be) are expressed in an orthogonal coordinate **system** and serving as basis for designing the **navigator area**, and thereby the **link** to the content in the information **space**.

14 Navigator according to claim 12, wherein the navigator area is expressed/represented by coordinates...

**19/3, K/20 (Item 8 from file: 349)**

DIALOG(R) File 349:PCT FULLTEXT

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00885149 \*\*Image available\*\*  
**INTENTION-BASED AUTOMATED CONFLICT PREDICTION AND NOTIFICATION SYSTEM**  
**SYSTEME AUTOMATISE DE PREDICTION ET DE NOTIFICATION DE CONFLITS A BASE**  
**D'INTENTION**

Patent Applicant/Inventor:

HOWARD Newton, 7872 Seafarer Way, Lorton, VA 22079, US, US (Residence),  
US (Nationality)

Legal Representative:

GREENWALD John W (agent), Gardner Groff Mehrman & Josephic, P.C., Paper  
Mill Village, Building 23, 600 Village Trace, Suite 300, Marietta, GA  
30067, US,

Patent and Priority Information (Country, Number, Date):

Patent: WO 200219290 A2-A3 20020307 (WO 0219290)  
Application: WO 2001US23728 20010725 (PCT/WO US0123728)  
Priority Application: US 2000221231 20000725

Designated States: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU  
CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP  
KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD  
SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW  
(EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR  
(OA) BF BJ CF CG CI CM GA GN GQ GW ML MR NE SN TD TG  
(AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZW  
(EA) AM AZ BY KG KZ MD RU TJ TM

Publication Language: English

Filing Language: English

Fulltext Word Count: 7473

Main International Patent Class: G06F-017/60

International Patent Class: G06F-017/30

Fulltext Availability:

Claims

Claim

... block diagram of the database management system 146 of FIG. 1 showing

sample tables, or **data storage locations**, within the database system. The database system 146 is a standard database with **spatial** and temporal engine enhancements. This module may be composed of several databases including, but not...

19/3,K/21 (Item 9 from file: 349)

DIALOG(R) File 349:PCT FULLTEXT

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00883113 \*\*Image available\*\*  
**METHOD FOR TRAINING SERVICE PERSONNEL TO SERVICE SELECTED EQUIPMENT**  
**METHODE DE FORMATION POUR PERSONNEL D'ENTRETIEN DEVANT ASSURER L'ENTRETIEN**  
**D'UN EQUIPEMENT DONNE**

Patent Applicant/Assignee:

GENERAL ELECTRIC COMPANY, One River Road, Schenectady, NY 12301, US, US  
(Residence), US (Nationality)

Inventor(s):

SCHLABACH James Edward, 4138 Mountain Laurel Drive, Erie, PA 16510, US,  
HIGGINS Michael, 11105 Apache Drive, Apartment 304, Parma Heights, OH  
44130, US,

PARRISH Keith, 71 Skallie Drive, North East, PA 16428, US,

Legal Representative:

MORA Enrique J (et al) (agent), Beusse, Brownlee, Bowdoin & Wolter PA,  
Suite 2500, 390 North Orange Avenue, Orlando, FL 32801, US,

Patent and Priority Information (Country, Number, Date):

Patent: WO 200217273 A2 20020228 (WO 0217273)

Application: WO 2001US12982 20010420 (PCT/WO US0112982)

Priority Application: US 2000644421 20000823; US 2000258747 20001229

Designated States: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU  
CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR  
KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE  
SG SI SK SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW  
(EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR  
(OA) BF BJ CF CG CI CM GA GN GW ML MR NE SN TD TG  
(AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZW  
(EA) AM AZ BY KG KZ MD RU TJ TM

Publication Language: English

Filing Language: English

Fulltext Word Count: 11438

Main International Patent Class: G06F-017/60

Fulltext Availability:

Claims

Claim

... status. The recommendation authoring subsystem 182 also provides to the repair status subsystem 184 the **data store locations** for the **data entry objects**. The purpose of this input is to ensure that the **data store locations** are recognizable by the repair status subsystem 184. The repair status subsystem 184 also supplies...

...from technical documents, rather than retrieval of the entire document. The technical documentation is also **indexed**. These **indexes** provide quick identification of document subsets. For example, the **indices** can support identification of all documentation pages related to a specific part number, a specific...

...Search results are presented in the form of a summation of the search results, with pointers to the actual pages so they can be retrieved on demand. The technical documentation subsystem...of technical documentation available to the technician using the portable unit 14. The technician can navigate or search through the technical documentation by using wizard applications or visual drill downs. Additionally, the technical documentation includes on-line tutors that can be...

19/3,K/22 (Item 10 from file: 349)

DIALOG(R)File 349:PCT FULLTEXT  
(c) 2004 WIPO/Univentio. All rts. reserv.

00876811 \*\*Image available\*\*  
**SYSTEM, METHOD AND COMPUTER PROGRAM PRODUCT FOR DEVICE, OPERATING SYSTEM, AND NETWORK TRANSPORT NEUTRAL SECURE INTERACTIVE MULTI-MEDIA MESSAGING SYSTEME, PROCEDE ET PRODUIT PROGRAMME D'ORDINATEUR POUR APPAREIL, SYSTEME D'EXPLOITATION ET MESSAGERIE MULTIMEDIA INTERACTIVE RESEAU, NEUTRE ET SECURISEE**

Patent Applicant/Assignee:

STORYMAIL INC, 15729 Los Gatos Boulevard, Los Gatos, CA 95032, US, US  
(Residence), US (Nationality)

Inventor(s):

ILLOWSKY Daniel H, 21363 Dexter, Cuptertino, CA 95014, US,  
WENOCUR Michael L, 4057 Amaranta Avenue, Palo Alto, CA 94306, US,  
BALDWIN Robert W, 990 Amarillo Avenue, Palo Alto, CA 94303, US,  
SAXBY David B, 14946 Granite Court, Saratoga, CA 95070, US,

Legal Representative:

ANANIAN R Michael (et al) (agent), Flehr Hohbach Test Albritton & Herbert LLP, 4 Embarcadero Center, Suite 3400, San Francisco, CA 94111-4187, US

Patent and Priority Information (Country, Number, Date):

Patent: WO 200210962 A1 20020207 (WO 0210962)  
Application: WO 2001US23713 20010727 (PCT/WO US0123713)  
Priority Application: US 2000627357 20000728; US 2000627358 20000728; US 2000627645 20000728; US 2000628205 20000728; US 2000706606 20001104; US 2000706609 20001104; US 2000706610 20001104; US 2000706611 20001104; US 2000706612 20001104; US 2000706613 20001104; US 2000706614 20001104; US 2000706615 20001104; US 2000706616 20001104; US 2000706617 20001104; US 2000706621 20001104; US 2000706661 20001104; US 2000706664 20001104; US 2001271455 20010225; US 2001912715 20010725; US 2001912936 20010725; US 2001912905 20010725; US 2001912773 20010725; US 2001912885 20010725; US 2001912860 20010725; US 2001912941 20010725; US 2001912901 20010725; US 2001912772 20010725

Designated States: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW  
(EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR  
(OA) BF BJ CF CG CI CM GA GN GQ GW ML MR NE SN TD TG  
(AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZW  
(EA) AM AZ BY KG KZ MD RU TJ TM

Publication Language: English

Filing Language: English

Fulltext Word Count: 169299

Main International Patent Class: G06F-017/00

Fulltext Availability:

Detailed Description

Detailed Description

... system resource.

These and other aspects of the system, device, method, computer program, and computer **program** product are provided by the invention and each may be utilized separately or in various...the recipient cannot view the screen. Such a case might be when a story player **application** is used to render and control a rich media message for someone whose only means... when necessary. After a procedure returns a status code to story player 194, an instruction **pointer** points to the next opcode to be executed as described above.

Story player 194 advantageously...in particular story 180 generation advantageously automated and dynamically adaptive. Having obtained all this information, **system** 300 then generates the optimum story 180 after a connection has been made with recipient...KID for the MK is the hash of the MK itself, but it is the **index** to this table, so it must be kept as a column. Rows can be deleted...6 and FIG. 7.

Story enabled client 336 includes, for example, computer program applications and **data** for playing a story received from a story server, for example, sending story server 302...

**19/3,K/23 (Item 11 from file: 349)**

DIALOG(R)File 349:PCT FULLTEXT  
(c) 2004 WIPO/Univentio. All rts. reserv.

00857190 \*\*Image available\*\*  
**A NETWORK DEVICE FOR SUPPORTING MULTIPLE UPPER LAYER NETWORK PROTOCOLS OVER A SINGLE NETWORK CONNECTION**  
**DISPOSITIF DE RESEAU COMPATIBLE AVEC PLUSIEURS PROTOCOLES DE RESEAU A COUCHE SUPERIEURE VIA UNE SEULE CONNEXION RESEAU**

Patent Applicant/Assignee:

EQUIPE COMMUNICATIONS CORPORATION, 100 Nagog Park, Acton, MA 01720, US,  
US (Residence), US (Nationality)

Inventor(s):

BLACK Darryl, 14 Hills Farm Lane, Hollis, NH 03049, US,  
LANGRIND Nicholas A, 8 Bedford Road, Carlisle, MA 01741, US,  
WHITESEL Richard L, 22 Shingle Mill Drive, Nashua, NH 03062, US,  
PERRY Thomas R, 230 Hayden Road, Groton, MA 01450, US,  
KIDDER Joseph D, 31 Bonad Road, Arlington, MA 02476, US,  
SULLIVAN Daniel J, 35 Glen Road, Hopkinton, MA 01748, US,  
FOX Barbara A, 67 Eliot Park, Arlington, MA 02474, US,  
MADSEN Jonathon D, 34 Park Avenue Extn., Arlington, MA 02474, US,  
PROVENCHER Roland T, 28 Richman Road, Hudson, NH 03051, US,  
PEARSON Terrence S, 8 Hills Farm Lane, Hollis, NH 03049, US,  
BHATT Umesh, 26 Brackenwood Drive, Nashua, NH 03062, US,  
POTHIER Peter, 54 Maplewood Drive, Townsend, MA 01469, US,  
MANOR Larry B, 15 Cross Road, Londonderry, NH 03053, US,

Legal Representative:

ENGELLENNER Thomas J (et al) (agent), Nutter, McClellan & Fish, LLP, One International Place, Boston, MA 02110-2699, US,

Patent and Priority Information (Country, Number, Date):

Patent: WO 200190843 A2-A3 20011129 (WO 0190843)

Application: WO 2001US15867 20010516 (PCT/WO US0115867)

Priority Application: US 2000574343 20000520; US 2000574341 20000520; US 2000574440 20000520; US 2000588398 20000606; US 2000591193 20000609; US 2000593034 20000613; US 2000596055 20000616; US 2000613940 20000711; US 2000616477 20000714; US 2000625101 20000724; US 2000633675 20000807; US 2000637800 20000811; US 2000653700 20000831; US 2000656123 20000906; US 2000663947 20000918; US 2000669364 20000926; US 2000687191 20001012; US

2000703856 20001101; US 2000711054 20001109; US 2000718224 20001121; US  
2001756936 20010109; US 2001777468 20010205; US 2001789665 20010221; US  
2001803783 20010312; US 2001832436 20010410

Designated States: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU  
CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR  
KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE  
SG SI SK SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW  
(EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR  
(OA) BF BJ CF CG CI CM GA GN GW ML MR NE SN TD TG  
(AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZW  
(EA) AM AZ BY KG KZ MD RU TJ TM

Publication Language: English

Filing Language: English

Fulltext Word Count: 210510

International Patent Class: G06F-017/30 ...

Fulltext Availability:

Detailed Description

Detailed Description

... each. card (e.g., line card 16a-16n), except central processor card  
12, in computer, system 10, MCD 38 communicates with a diagnostic  
program (DP) 40a-40n being executed by the...

19/3,K/24 (Item 12 from file: 349)

DIALOG(R) File 349:PCT FULLTEXT

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00847414 \*\*Image available\*\*

**AN INFORMATION NAVIGATION SYSTEM AND METHOD FOR USING THE SAME  
SYSTEME DE NAVIGATION ET PROCEDE D'UTILISATION**

Patent Applicant/Assignee:

YOURDOCTOR COM, 2895 Seventh Street, Berkeley, CA 94710, US, US  
(Residence), US (Nationality)

Inventor(s):

NORMAN James, 4907 Londonderry Drive, Tampa, FL 33647, US,  
DOLEZALEK J Stephan, 56 Hillbrook Drive, Portola Valley, CA 94028, US,

Legal Representative:

MALLIE Michael J (et al) (agent), Blakely, Sokoloff, Taylor & Zafman LLP,  
12400 Wilshire Boulevard, 7th Floor, Los Angeles, CA 90025, US,

Patent and Priority Information (Country, Number, Date):

Patent: WO 200180097 A2-A3 20011025 (WO 0180097)

Application: WO 2001US40510 20010412 (PCT/WO US2001040510)

Priority Application: US 2000547781 20000412

Designated States: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU  
CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR  
KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE  
SG SI SK SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW  
(EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR  
(OA) BF BJ CF CG CI CM GA GN GW ML MR NE SN TD TG  
(AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZW  
(EA) AM AZ BY KG KZ MD RU TJ TM

Publication Language: English

Filing Language: English

Fulltext Word Count: 7517

Main International Patent Class: G06F-017/30

Fulltext Availability:

Detailed Description

**English Abstract**

...users of that particular type of information (e.g., technology, law, medicine, travel, etc.). Each **location** on the diagram is **cross-indexed** with a category of information and that combination leads to specific information being requested from...

**Detailed Description**

... users of that particular type of information (e.g., technology, law, medicine, travel, etc.). Each **location** on the diagram is **cross-indexed** with a category of information and that combination leads to specific information being requested from...

**19/3,K/25 (Item 13 from file: 349)**

DIALOG(R) File 349:PCT FULLTEXT  
(c) 2004 WIPO/Univentio. All rts. reserv.

00807441 \*\*Image available\*\*

**SERVER-BASED BILLING AND PAYMENT SYSTEM**  
**SYSTEME DE FACTURATION ET DE PAIEMENT BASE SERVEUR**

Patent Applicant/Assignee:

BOTTOMLINE TECHNOLOGIES INC, 155 Fleet Street, Portsmouth, NH 03801, US,  
US (Residence), US (Nationality)

Inventor(s):

HINTON Brian, 2405 Lakeside Drive, Aurora, IL 60504, US,  
DOMALEWSKI Richard, The Northern Trust Company, 50 S. LaSalle Street,  
Chicago, IL 60675, US,

Legal Representative:

PFLEGER Edmund Paul (agent), Hayes, Soloway, Hennessey, Grossman & Hage,  
P.C., 130 W. Cushing Street, Tucson, AZ 85701, US,

Patent and Priority Information (Country, Number, Date):

Patent: WO 200141020 A1 20010607 (WO 0141020)  
Application: WO 2000US32729 20001201 (PCT/WO US0032729)  
Priority Application: US 99168940 19991203; US 2000527560 20000316; US  
2000527208 20000316; US 2000526791 20000316; US 2000526792 20000316; US  
2000526793 20000316; US 2000527209 20000316

Designated States: CA CN MX SG

(EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR

Publication Language: English

Filing Language: English

Fulltext Word Count: 12933

Main International Patent Class: G06F-017/60

Fulltext Availability:

Claims

Claim

... g., personal and/or mainframe computers provisioned with Internet wide area network communications hardware and **software** (e.g.,CQI-based, FTP, Netscape **NavigatoFm** or Microsoft Internet I I Exploreem HTML Internet Browser **software** , and/or direct real-time TCP/IP interfaces accessing real-time TCP/IP sockets) for...4) line item adjustment. The dispute rules are associated with each invoice at an appropriate **data** field **location** in the invoice, preferably utilizing pull-down menus within each data field that is accessible be related to one another, using, for example, **pointer** data. Data is logically organized as tables but is not necessarily physically stored as such...

**19/3,K/26 (Item 14 from file: 349)**

DIALOG(R) File 349:PCT FULLTEXT  
(c) 2004 WIPO/Univentio. All rts. reserv.

00806392

TECHNOLOGY SHARING DURING ASSET MANAGEMENT AND ASSET TRACKING IN A NETWORK-BASED SUPPLY CHAIN ENVIRONMENT AND METHOD THEREOF

PARTAGE TECHNOLOGIQUE LORS DE LA GESTION ET DU SUIVI DU PARC INFORMATIQUE DANS UN ENVIRONNEMENT DU TYPE CHAINE D'APPROVISIONNEMENT RESEAUTEE, ET PROCEDE ASSOCIE

Patent Applicant/Assignee:

ACCENTURE LLP, 1661 Page Mill Road, Palo Alto, CA 94304, US, US  
(Residence), US (Nationality)

Inventor(s):

MIKURAK Michael G, 108 Englewood Blvd., Hamilton, NJ 08610, US,

Legal Representative:

HICKMAN Paul L (agent), Oppenheimer Wolff & Donnelly, LLP, 38th Floor,  
2029 Century Park East, Los Angeles, CA 90067-3024, US,

Patent and Priority Information (Country, Number, Date):

Patent: WO 200139086 A2 20010531 (WO 0139086)

Application: WO 2000US32310 20001122 (PCT/WO US0032310)

Priority Application: US 99444653 19991122; US 99447623 19991122

Designated States: AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU CZ DE  
DK DM DZ EE ES FI GB GE GH GM HR HU ID IL IS JP KE KG KP KR KZ LC LK LR  
LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL  
TJ TM TR TT TZ UA UG UZ VN YU ZW  
(EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR  
(OA) BF BJ CF CG CI CM GA GN GW ML MR NE SN TD TG  
(AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZW  
(EA) AM AZ BY KG KZ MD RU TJ TM

Publication Language: English

Filing Language: English

Fulltext Word Count: 156214

Main International Patent Class: G06F-017/60

Fulltext Availability:

Detailed Description

Detailed Description

... of Service and Billing

A typical telecommunication network comprises multiple telecommunication switches located throughout a geographical area. When a user makes a call, the call may be routed through one or mo...

19/3,K/27 (Item 15 from file: 349)

DIALOG(R) File 349:PCT FULLTEXT

(c) 2004 WIPO/Univentio. All rts. reserv.

00802534

ANY-TO-ANY COMPONENT COMPUTING SYSTEM

SYSTEME INFORMATIQUE A COMPOSANTS TOUTE CATEGORIE

Patent Applicant/Assignee:

E-BRAIN SOLUTIONS LLC, 1200 Mountain Creek Road, Suite 440, Chattanooga,  
TN 34705, US, US (Residence), US (Nationality), (For all designated  
states except: US)

Patent Applicant/Inventor:

WARREN Peter, 1200 Mountain Creek Road, Suite 440, Chattanooga, TN 37405,  
US, GB (Residence), GB (Nationality), (Designated only for: US)

LOWE Steven, 1625 Starboard Drive, Hixson, TN 37343, US, US (Residence),  
US (Nationality), (Designated only for: US)

Legal Representative:

MEHRMAN Michael J (agent), Paper Mill Village, Building 23, 600 Village Trace, Suite 300, Marietta, GA 30067, US,

Patent and Priority Information (Country, Number, Date):

Patent: WO 200135216 A2-A3 20010517 (WO 0135216)

Application: WO 2000US31231 20001113 (PCT/WO US0031231)

Priority Application: US 99164884 19991112

Designated States: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW  
(EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR  
(OA) BF BJ CF CG CI CM GA GN GW ML MR NE SN TD TG  
(AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZW  
(EA) AM AZ BY KG KZ MD RU TJ TM

Publication Language: English

Filing Language: English

Fulltext Word Count: 275671

International Patent Class: G06F-017/22

Fulltext Availability:

Claims

Claim

... displaying that data item type. Thus, a user on a remote computer system can simply link to the appropriate field of the desired data record in the Data Relation

29

Table...Invitingly He looked invitingly

Time invite time invite time, let's send out the invitations.

Space ( Location ) Invitation go to the invitation

Energy Inviting I am inviting Joe

5 Matter Invitation put...

19/3,K/28 (Item 16 from file: 349)

DIALOG(R) File 349:PCT FULLTEXT

(c) 2004 WIPO/Univentio. All rts. reserv.

00796237 \*\*Image available\*\*

GENERATING AND NAVIGATING STREAMING DYNAMIC PRICING INFORMATION  
PRODUCTION ET TRANSMISSION DE FLUX D'INFORMATIONS DE TARIFICATIONS  
DYNAMIQUES

Patent Applicant/Assignee:

NAVLET COM INC, 13314 I Street, Omaha, NE 68137, US, US (Residence), US  
(Nationality), (For all designated states except: US)

Patent Applicant/Inventor:

WOOLSTON Thomas G, 8408 Washington Avenue, Alexandria, VA 22309, US, US  
(Residence), US (Nationality), (Designated only for: US)

KAVITZ Paul Andrew, 9 Dion, Laguna Niguel, CA 92677, US, US (Residence),  
US (Nationality), (Designated only for: US)

MCEACHERN Cameron David John, 215 Exeter Avenue, San Carlos, CA 94070, US  
, US (Residence), AU (Nationality), (Designated only for: US)

Legal Representative:

HAYDEN John F (et al) (agent), Fish & Richardson P.C., 601 Thirteenth  
Street, NW, Washington, DC 20005, US,

Patent and Priority Information (Country, Number, Date):

Patent: WO 200129746 A2-A3 20010426 (WO 0129746)

Application: WO 2000US6656 20000315 (PCT/WO US0006656)

Priority Application: US 99422057 19991021

Parent Application/Grant:

Related by Continuation to: US 99422057 19991021 (CIP)  
Designated States: AE AL AM AT AU AZ BA BB BG BR BY CA CH CN CR CU CZ DE DK  
DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK  
LR LS LT LU LV MA MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL  
TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW  
(EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE  
(OA) BF BJ CF CG CI CM GA GN GW ML MR NE SN TD TG  
(AP) GH GM KE LS MW SD SL SZ TZ UG ZW  
(EA) AM AZ BY KG KZ MD RU TJ TM

Publication Language: English

Filing Language: English

Fulltext Word Count: 14718

Main International Patent Class: G06F-017/60

Fulltext Availability:

Detailed Description

Detailed Description

... Thus, the system may provide a taxonomic broadcast of bid/ask information that may be **navigated** by navlets, or used by other **application** programs for database injection to provide a useful and economical way to search and/or **index** bid/ask information. The SNAP or application layer frame may use the source and destination...

...see figure 10, to encapsulate UDP packets where the pseudoheader is encoded 25 with taxonomy, **geography**, flags and other meta- **data** type information for the UDP data payload to create SNAP frames for use by the

...

19/3,K/29 (Item 17 from file: 349)

DIALOG(R)File 349:PCT FULLTEXT

(c) 2004 WIPO/Univentio. All rts. reserv.

00796236 \*\*Image available\*\*

CONTEXT-SENSITIVE SWITCHING IN A COMPUTER NETWORK ENVIRONMENT

COMMUTATION CONTEXTUELLE DANS UN ENVIRONNEMENT DE RESEAU INFORMATIQUE

Patent Applicant/Assignee:

NAVLET COM INC, 13314 I Street, Omaha, NE 68137, US, US (Residence), US  
(Nationality), (For all designated states except: US)

Patent Applicant/Inventor:

WOOLSTON Thomas G, 8408 Washington Avenue, Alexandria, VA 22309, US, US  
(Residence), US (Nationality), (Designated only for: US)

KAVITZ Paul Andrew, 9 Dion, Laguna Niguel, CA 92677, US, US (Residence),  
US (Nationality), (Designated only for: US)

MCEACHERN Cameron David John, 215 Exeter Avenue, San Carlos, CA 94070, US  
, US (Residence), AU (Nationality), (Designated only for: US)

Legal Representative:

HUNTINGTON R Danny (et al) (agent), Burns, Doane, Swecker & Mathis, P.O.  
Box 1404, Alexandria, VA 22313-1404, US,

Patent and Priority Information (Country, Number, Date):

Patent: WO 200129745 A2-A3 20010426 (WO 0129745)

Application: WO 2000US6646 20000315 (PCT/WO US0006646)

Priority Application: US 99422058 19991021

Parent Application/Grant:

Related by Continuation to: US 99422058 19991021 (CIP)

Designated States: AE AL AM AT AU AZ BA BB BG BR BY CA CH CN CR CU CZ DE DK

DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK

LR LS LT LU LV MA MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL

TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW

(EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE

(OA) BF BJ CF CG CI CM GA GN GW ML MR NE SN TD TG  
(AP) GH GM KE LS MW SD SL SZ TZ UG ZW  
(EA) AM AZ BY KG KZ MD RU TJ TM

Publication Language: English

Filing Language: English

Fulltext Word Count: 16471

International Patent Class: G06F-017/60 ...

... G06F-017/30

Fulltext Availability:

Detailed Description

Detailed Description

... Thus, the system may provide a taxonomic broadcast of bid/ask information that may be navigated by navlets, or used by other application programs for database injection to provide a useful and economical way to search and/or index bid/ask information. The SNAP or application layer frame may use the source and destination...

...see figure 10, to encapsulate LJDP packets where the pseudoheader is encoded 25 with taxonomy, geography, flags and other meta-data type information for the UDP data payload to create SNAP frames for use by the ...

19/3,K/30 (Item 18 from file: 349)

DIALOG(R)File 349:PCT FULLTEXT

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00796235 \*\*Image available\*\*

MODULAR COMPUTER PROGRAM FOR MANAGING DYNAMIC PRICING INFORMATION  
PROGRAMME INFORMATIQUE MODULAIRE PERMETTANT DE GERER DES INFORMATIONS DE  
TARIFICATIONS DYNAMIQUES

Patent Applicant/Assignee:

NAVLET COM INC, 13314 I Street, Omaha, NE 68137, US, US (Residence), US  
(Nationality), (For all designated states except: US)

Patent Applicant/Inventor:

WOOLSTON Thomas G, 8408 Washington Avenue, Alexandria, VA 22309, US, US  
(Residence), US (Nationality), (Designated only for: US)

KAVITZ Paul Andrew, 9 Dion, Laguna Niguel, CA 92677, US, US (Residence),  
US (Nationality), (Designated only for: US)

MCEACHERN Cameron David John, 215 Exeter Avenue, San Carlos, CA 94070, US  
, US (Residence), AU (Nationality), (Designated only for: US)

Legal Representative:

HAYDEN John F (et al) (agent), Fish & Richardson P.C., 601 Thirteenth  
Street, N.W., Washington, DC 20005, US,

Patent and Priority Information (Country, Number, Date):

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Priority Application: US 99422339 19991021

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DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK  
LR LS LT LU LV MA MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL  
TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW  
(EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE  
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Main International Patent Class: G06F-017/60

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Detailed Description

Detailed Description

... Thus, the system may provide a taxonomic broadcast of bid/ask information that may be **navigated** by navlets, or used by other **application** programs for database injection to provide a useful and economical way to search and/or **index** bid/ask information. The SNAP or application layer frame may use the source and destination...

...see figure 10, to encapsulate UDP packets where the pseudoheader is encoded - 25 with taxonomy, **geography**, flags and other meta- **data** type information for the LJDP data payload to create SNAP frames for use by the...

19/3,K/31 (Item 19 from file: 349)

DIALOG(R)File 349:PCT FULLTEXT  
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00796234 \*\*Image available\*\*

**ESTABLISHING A FUNCTIONAL BRAND IN A COMPUTER NETWORK ENVIRONMENT**  
**ETABLISSEMENT D'UNE MARQUE FONCTIONNELLE DANS UN ENVIRONNEMENT DE RESEAU**  
**INFORMATIQUE**

Patent Applicant/Assignee:

NAVLET COM INC, 13314 I Street, Omaha, NE 68137, US, US (Residence), US  
(Nationality), (For all designated states except: US)

Patent Applicant/Inventor:

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(Residence), US (Nationality), (Designated only for: US)  
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US (Nationality), (Designated only for: US)  
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, US (Residence), AU (Nationality), (Designated only for: US)

Legal Representative:

HAYDEN John F (et al) (agent), Fish & Richardson P.C., 601 Thirteenth  
Street, N.W., Washington, DC 20005, US,

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Application: WO 2000US6594 20000315 (PCT/WO US0006594)  
Priority Application: US 99422059 19991021

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Related by Continuation to: US 99422059 19991021 (CIP)

Designated States: AE AL AM AT AU AZ BA BB BG BR BY CA CH CN CR CU CZ DE DK  
DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK  
LR LS LT LU LV MA MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL  
TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW  
(EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE  
(OA) BF BJ CF CG CI CM GA GN GW ML MR NE SN TD TG  
(AP) GH GM KE LS MW SD SL SZ TZ UG ZW  
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Publication Language: English

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APPLICATION (CC, No, Date): EP 99301925 990312;  
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DESIGNATED STATES: BE; CH; DE; DK; ES; FI; FR; GB; IT; LI; LU; NL; SE  
EXTENDED DESIGNATED STATES: AL; LT; LV; MK; RO; SI  
INTERNATIONAL PATENT CLASS: G01C-021/20; G06T-017/50; G06F-017/30  
ABSTRACT WORD COUNT: 201

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Figure number on first page: 1

LANGUAGE (Publication, Procedural, Application): English; English; English  
FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS A	(English)	9938	1358
SPEC A	(English)	9938	16026
Total word count - document A			17384
Total word count - document B			0
Total word count - documents A + B			17384

...INTERNATIONAL PATENT CLASS: G06F-017/30

...ABSTRACT plurality of data records that represent geographic features and which can be used in a **navigation system**. The method includes the step of interleaving **parcels** containing pluralities of data records of a first type with parcels containing pluralities of data...

...SPECIFICATION subsets provides for efficient use of the data when using each separate function.

Although the **division** of the **geographic data** into subsets provides for efficient use of the data by each of the different navigation...

...display with the calculated route highlighted. In order to accomplish this, the routing subset of **geographic data** is accessed first to obtain the routing road **segment** data entities for the optimum route, and then the cartographic subset of the geographic database...

...entities corresponding to the routing data entities. To permit these data subsets to work together, **index** files cross reference files, search trees, or other techniques may be used. Although these techniques ...

...continues to be room for improvement in providing a geographic database for use with a **navigation application**.

SUMMARY OF THE INVENTION

To address the above concerns, according to one aspect of the which can be used in a **navigation system**. The method includes the step of interleaving **parcels** containing pluralities of data records of a first type with parcels containing pluralities of data...b. Separate subsets of geographic data

As mentioned above, one way that the accessing of **geographic data** can be enhanced for performing various navigation functions is to provide separate collections or subsets of the **geographic data** for use by each of the separate functions in the **navigation application program**. Figure 5 illustrates the geographic database 40 comprised of separate routing data 136, cartographic data 137 (for map display), maneuver data 138 (for route guidance), and point-of-interest **data** 139. A **geographic** database may be defined with fewer or more subsets than these, and other types of data may be defined and included. To permit these data subsets

to work together, **index** files 140 are included that provide cross references, search trees, or other **data** finding techniques.

c. Layering of **geographic data**

Another way that the **geographic data** can be organized to enhance their use is to provide the data in layers. Some...subset types and layers of these types, the data can be further organized to facilitate **spatial access**.

Several of the **navigation** functions provided in a **navigation system** may require access to the **geographic data spatially**. One way this arises is that a function in a **navigation application program** requires finding a data entity record in a geographic database given the physical **location** represented by the **data** entity in the **geographic region**. The **data** entity may be a road **segment** record that represents a portion of a road in the geographic region and the function...

...location in the geographic region of the portion of the road represented by the road **segment** record. Another way **spatial access** arises is when a function in a **navigation application program** requires finding several or all of a type of data records located close to a...

...used to provide for spatial access. One kind of technique, **parcelization**, is described below.

e. **Parcelization** .

**Parcelization** is included among the techniques that can be used to facilitate the use of **geographic data** by navigation systems. Assuming that all the data records for a given entire geographic region...

...order to perform a navigation function. To provide for this, the data are organized into **parcels** . When data are **parcelized** , the plurality of **data** records that together comprise the **geographic data** are grouped together into separate **groups** or **parcels** . A **parcel** of data is established to contain data that are always accessed together. This may relate...n is an integer value greater than 1.)

Parcelization can be used in conjunction with **spatial access** to facilitate the use of data to enhance performance of the **navigation system** . When **geographic data** are organized **spatially** , features that are close together physically in the **geographic region** are represented by **data** records that are physically (or logically) close together in the database. **Geographic data** can be both **parcelized** and **spatially** organized to take advantage of both these techniques.

For purposes of forming the data into...

...data by the navigation functions and others of these kinds of data may not be **parcelized spatially** . **Spatially - parcelized** data are arranged so that the **data** that represent **geographically proximate** features are located logically and/or physically proximate in the database 40 and/or on the medium 32. For some of the **navigation application** functions, **spatial parcelization** of their respective **data** provides for reading closely related **geographic data** from the medium more quickly and loading related geographic data into memory where they can...For example, data that represents the names of streets may be organized alphabetically instead of **spatially** .)

### III. SEGMENT AGGREGATION

a. Overview.

In a present embodiment, the **geographic** database includes **data** records that represent aggregations of road **segments**. These data records that represent aggregations of **segments** of roads are included in the database in addition to the data records (e.g...).

...also possible that if records that represent road segment aggregations are used, the number of **segments** that make up a final calculated route may be reduced thereby improving **navigation system** performance. In addition, it is also possible that if records that represent road **segment** aggregations are used, the overall size of the database may be reduced.

One way to...areas are selected so that each rectangular area encompasses geographic features that are represented by **geographic** **data0** records contained within a separate **parcel** for a given layer and type of data. In Figure 22, the boundaries define the rectangular areas that encompass **geographic** features represented by routing **data** records contained in separate **parcels** of routing layer 0 data (It is understood that Figure 22 shows just a portion...alternative embodiments, aggregated segment records may be formed without using rank attributes. For example, aggregated **segments** may be formed by taking into account traffic patterns or vehicle usage.

In further alternative embodiments, the **navigation system** should be understood to include any computer-based **system** that provides **navigation** functions to an end-user regardless of hardware platform or architecture. For example, the navigation...

...the end-user and the data transmitted to the end-user over a wireless communications **link**.

In the embodiments described above, **geographic** data were described as being **parcelized**. In alternative embodiments, the geographic data may not be **parcelized** or may be organized in a different manner. These data records may be either compressed...

19/3,K/10 (Item 10 from file: 348)  
DIALOG(R) File 348:EUROPEAN PATENTS  
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00919858

**System and method for storing geographic data on a physical storage medium**  
**Vorrichtung und Verfahren zum Speichern von geographischen Daten auf einem**  
**physikalischen Speichermedium**

**Dispositif et methode pour la memorisation de donnees geographiques sur un**  
**support de memoire physique**

PATENT ASSIGNEE:

Navigation Technologies Corporation, (2410913), The Merchandise Mart,  
Suite 900, Chicago, Illinois 60654, (US), (Proprietor designated  
states: all)

INVENTOR:

Israni, Vijaya S., 4431 Bayside Circle, Hoffman Estates, Illinois 60195,  
(US)

Ashby, Richard A., P O Box 351, Hebron, Illinois 60034, (US)

Bouzide, Paul M., 1747 West Henderson Street, Chicago, Illinois 60614,  
(US)

Jasper, John C., 824 North Drury Lane, Arlington Heights, Illinois 60004,  
(US)

Fernekes, Robert P., 482 West Clare, Wooddale, Illinois 60191, (US)

Nyczak, Gregory M., 1036 Oakwood Drive, Westmont, Illinois 60559, (US)

Smith, Nicholas E., 209 Pleasant Street, Oak Park, Illinois 60302, (US)

Lampert, David S., 650 Blackstone Place, Highland Park, Illinois 60035,

(US)

Meek, James A., 1523 East Anderson Drive, Palatine, Illinois 60067, (US)  
Crane, Aaron I., 670 Wren Avenue, Palatine, Illinois 60067, (US)

LEGAL REPRESENTATIVE:

McLeish, Nicholas Alistair Maxwell et al (74621), Boult Wade Tennant  
Verulam Gardens 70 Gray's Inn Road, London WC1X 8BT, (GB)

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ABSTRACT WORD COUNT: 321

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Available Text	Language	Update	Word Count
CLAIMS A	(English)	199818	3411
CLAIMS B	(English)	200343	1033
CLAIMS B	(German)	200343	1089
CLAIMS B	(French)	200343	1177
SPEC A	(English)	199818	29314
SPEC B	(English)	200343	29324
Total word count - document A			32731
Total word count - document B			32623
Total word count - documents A + B			65354

...INTERNATIONAL PATENT CLASS: G06F-017/30

...ABSTRACT A2

An improved method and system for storage of geographic data on physical storage media. The geographic data are stored in a manner that facilitates and enhances use and access of the data by various navigation application functions in navigation systems that use the data. The geographic data includes a parcelization that separates the geographic data into parcels having less than or equal to a maximum parcel size but having at least a desired fill percentage. The parcelization method also provides for a division arrangement that facilitates addressing and identification of the parcels. According to a further aspect, the geographic data includes special nodal entities that are used to collapse complex intersections, such as roundabouts, cloverleaves...

...and used in a route calculation program in place of regular node entities. Further, the geographic data include a normalized attribute array that includes reoccurring combinations of certain selected attributes of the geographic data. Indices to the array are included in place of data corresponding to the selected attributes. When a navigation application program requests data, an entry in the normalized attribute table pointed to by an index in the data is used to return the requested data in the particular combination of attributes from the normalized attribute array. The geographic data is compiled by a method that facilitates access to the data on a physical medium...

...SPECIFICATION in a manner that facilitates and enhances use and access of the data by various **navigation application** functions in **navigation systems** that use the data.

According one aspect, there is provided a **parcelization** method for dividing the geographic data into separate parcels. The parcelization method provides for parcels...

...route calculation.

According to a still further aspect, a physical storage medium has stored thereon **geographic data** that includes at least one normalized attribute array. The normalized attribute array is provided as...

...storage medium. The normalized attribute array includes reoccurring combinations of certain selected attributes within the **geographic data**. Within entity records in the **geographic data**, **indices** are included in place of data corresponding to the selected attributes. The **indices** refer to entries in the normalized attribute array. When a **navigation application program** accesses a data entity, the entry in the normalized attribute table pointed to by the **index** in the data entity is used to build the entire data record including the particular combination of attributes pointed to by the **index**. By including combinations of **geographic data** attributes in a normalized attribute array, storage **space** on the medium can be conserved and access to the data can be improved.

According...

...According to a still further aspect, shape points are generated for data entities that represent **segments** of roads. In collecting **geographic data** for use in **navigation systems**, shape points are determined for **segments** of roads that bend or curve so that the position of points along the road segment can be accurately determined. When road **segments** are straight, shape points are generally not included. When used in a **navigation system**, this lack of shape points for long, straight portions of a road **segment** may result in difficulty associating the road segment with a particular locality during map display...

...The aspects of the organization of the geographic data that facilitate the navigation functions include **parcelization** and parcel identification of the **geographic data**, and the inclusion of normalized attributes, supernodes, and **segment** aggregation in the **geographic data**. Each of these aspects is described in more detail below.

Each **navigation function application** or subprogram 28, 30, 32, and 34, typically uses only a specific subset of the...

...or may have different performance requirements.

Referring to FIG. 3, in a preferred embodiment, the **geographic data** 40 are organized as separate **groups** or subsets of the **geographic data**. Each of the **groups** includes different portions or collections of the data. The portion of the data included in each of the **groups** of the **geographic data** is related to the **navigation application** function that utilizes the specific collection of the data. In general, each of the functions...

...larger total database data content and potentially less efficient access.

Another factor used to determine **parcel size** includes the memory constraints of the **navigation system** that will use the data. Many **navigation systems** have limited memory, or memory that is optimized

for use with certain-sized blocks of...

...possible, these types of hardware requirements are also considered in determining the size of a **data parcel**.

The **geographic data** 40 includes one separate group 48 of **parcels** of data used by the route calculation function 28, another separate group 50 of parcels...

...physical media, such as CD-ROM disc, PC card, etc.

Some of the subsets of **geographic data** are organized **spatially**.

**Spatially**-organized data are arranged so that the **data** that represent **geographically** proximate features are located physically proximate in the data set 40 and on the medium 22. For some of the **navigation application** functions, **spatial** organization of their respective **data** provides for reading closely related **geographic data** from the medium more quickly and loading related geographic data into memory where it can...groupings or parcels. For some map data, the parcels are spatially-organized, i.e. each **parcel** represents geographic data encompassed with a geographic rectangular area (including square areas) of the physical **region**.

The groupings of **data** into **parcels** are made for several purposes. First, data are organized into **parcels** in an attempt to group into one **parcel**, or as few parcels as possible, most...

...be handled. Another reason that data are parcelized is so that data are grouped into **parcels** with each **parcel** having a size that can be readily used by the **navigation system applications**. These sizes relate to hardware and memory constraints and may be regular multiples of 2Kbytes...same in all physical storage formats, since it is accessible to generic independent components of **navigation applications**.

The following conventions are used for data types in the map data **parcel** headers:

Bytes in map data are in Big Endian form (most significant bit first), and...attribute array that includes the particular combination of attributes that had been replaced.

In a **geographic data** set in which certain of the attributes are replaced by **indexes** to a global normalized attribute array, it is possible that some of the records cannot be **indexed** to the array. These records would include those in which the combination of attributes is...

...records are not included in the global normalized array, these records would not include an **index** to the global normalized attribute array. For records having less common attribute combinations, a separate...

...the same unusual combination of attributes not found in the global normalized attribute array, the **index** in each of the records that has this particular unusual combination of attributes refers to...

...the local array. In a present embodiment, all the records in the **parcel** include an **index** to either the global normalized attribute array or to the local normalized attribute array. This...

...it is not efficient to load such unusual combinations into memory unless needed by the **navigation application** when using the particular **parcel** that includes them.

For example, referring to FIG. 7B, the route calculation function 28 is ...the **parcel**. The cells may be defined by a regular grid pattern overlaid on the **parcel**. A header is created in the **parcel** to identify the **parcel** cell structure.

The cells represent relatively large non-overlapping geographic rectangles within the **parcel**'s coverage area. This facilitates the extraction of data corresponding to a search rectangle that overlaps the **parcel**'s coverage area. The cells are additionally used for managing zooming and panning of a geographic area represented by the cartographic data in the **parcel** by a map display navigation application function. Although a preferred embodiment of the navigation system may read data only in whole **parcels** from the medium, the data are compressed. Therefore, by using a cell structure, only a subset of the data in the **parcel**, i.e., the cell content, needs to be expanded and returned to the navigation application to display a map location at a given zoom level. Without such subdivision, it would be necessary to expand and examine an entire **parcel** to locate data within the search rectangle. Neighboring subsets or cells of the data can...output file 1001 is stored on the physical medium, such as a CD-ROM, the **parcel** ID information permits rapid location of the data on the medium since the **parcel** ID references in the data correspond directly to locations on the medium. That is, in the embodiment described above, the **parcel** ID represents an offset (plus parcel size) from the start of the single map data...

...SPECIFICATION an improved computer-readable storage medium product having geographic data stored thereon for use in navigation systems.

EP 0280795 A1 discloses a method for storing a digital database by dividing it into **parcels**. The database is divided into main cells and then into base cells. Adjacent base cells...

...in a manner that facilitates and enhances use and access of the data by various navigation application functions in navigation systems that use the data.

Embodiments provide a **parcelization** method for dividing the geographic data into separate parcels. The parcelization method provides for parcels...

...representations thereby facilitating route calculation.

Embodiments also provide a physical storage medium having stored thereon **geographic data** that includes at least one normalized attribute array. The normalized attribute array is provided as...

...storage medium. The normalized attribute array includes reoccurring combinations of certain selected attributes within the **geographic data**. Within entity records in the **geographic data**, **indices** are included in place of data corresponding to the selected attributes. The **indices** refer to entries in the normalized attribute array. When a navigation application program accesses a data entity, the entry in the normalized attribute table pointed to by the **index** in the data entity is used to build the entire data record including the particular combination of attributes pointed to by the **index**. By including combinations of **geographic data** attributes in a normalized attribute array, storage space on the medium can be conserved and access to the data can be improved.

Embodiments...

...end points.

Embodiments also provide that shape points are generated for data entities that represent **segments** of roads. In collecting **geographic data** for use in navigation systems, shape points are determined for **segments** of roads that bend or curve so that the position of points along the road segment can be accurately determined. When road **segments**

are straight, shape points are generally not included. When used in a navigation system, this lack of shape points for long, straight portions of a road segment may result in difficulty associating the road segment with a particular locality during map display...

...The aspects of the organization of the geographic data that facilitate the navigation functions include parcelization and parcel identification of the geographic data, and the inclusion of normalized attributes, supernodes, and segment aggregation in the geographic data. Each of these aspects is described in more detail below.

Each navigation function application or subprogram 28, 30, 32, and 34, typically uses only a specific subset of the...

...or may have different performance requirements.

Referring to FIG. 3, in a preferred embodiment, the geographic data 40 are organized as separate groups or subsets of the geographic data. Each of the groups includes different portions or collections of the data. The portion of the data included in each of the groups of the geographic data is related to the navigation application function that utilizes the specific collection of the data. In general, each of the functions...larger total database data content and potentially less efficient access.

Another factor used to determine parcel size includes the memory constraints of the navigation system that will use the data. Many navigation systems have limited memory, or memory that is optimized for use with certain-sized blocks of...

...possible, these types of hardware requirements are also considered in determining the size of a data parcel.

The geographic data 40 includes one separate group 48 of parcels of data used by the route calculation function 28, another separate group 50 of parcels...

...physical media, such as CD-ROM disc, PC card, etc.

Some of the subsets of geographic data are organized spatially. Spatially-organized data are arranged so that the data that represent geographically proximate features are located physically proximate in the data set 40 and on the medium 22. For some of the navigation application functions, spatial organization of their respective data provides for reading closely related geographic data from the medium more quickly and loading related geographic data into memory where it can ...

...groupings or parcels. For some map data, the parcels are spatially-organized, i.e. each parcel represents geographic data encompassed with a geographic rectangular area (including square areas) of the physical region.

The groupings of data into parcels are made for several purposes. First, data are organized into parcels in an attempt to group into one parcel, or as few parcels as possible, most...

...be handled. Another reason that data are parcelized is so that data are grouped into parcels with each parcel having a size that can be readily used by the navigation system applications. These sizes relate to hardware and memory constraints and may be regular multiples of 2Kbytes...same in all physical storage formats, since it is accessible to generic independent components of navigation applications.

The following conventions are used for data types in the map data parcel headers: Bytes in map data are in Big Endian form (most significant bit first), and...attribute array that includes the

particular combination of attributes that had been replaced.

In a **geographic data** set in which certain of the attributes are replaced by **indexes** to a global normalized attribute array, it is possible that some of the records cannot be **indexed** to the array. These records would include those in which the combination of attributes is...

...records are not included in the global normalized array, these records would not include an **index** to the global normalized attribute array. For records having less common attribute combinations, a separate...

...the same unusual combination of attributes not found in the global normalized attribute array, the **index** in each of the records that has this particular unusual combination of attributes refers to...

...the local array. In a present embodiment, all the records in the **parcel** include an **index** to either the global normalized attribute array or to the local normalized attribute array. This...

...it is not efficient to load such unusual combinations into memory unless needed by the **navigation application** when using the particular **parcel** that includes them.

For example, referring to FIG. 7B, the route calculation function 28 is ...the **parcel**. The cells may be defined by a regular grid pattern overlaid on the **parcel**. A header is created in the **parcel** to identify the **parcel** cell structure.

The cells represent relatively large non-**overlapping geographic** rectangles within the **parcel**'s coverage area. This facilitates the extraction of data corresponding to a search rectangle that **overlaps** the **parcel**'s coverage **area**. The cells are additionally used for managing zooming and panning of a geographic area represented by the cartographic data in the **parcel** by a map display **navigation application** function. Although a preferred embodiment of the **navigation** system may read data only in whole **parcels** from the medium, the data are compressed. Therefore, by using a cell structure, only a subset of the data in the **parcel**, i.e., the cell content, needs to be expanded and returned to the **navigation application** to display a map location at a given zoom level. Without such subdivision, it would be necessary to expand and examine an entire **parcel** to locate data within the search... output file 1001 is stored on the physical medium, such as a CD-ROM, the **parcel** ID information permits rapid location of the **data** on the medium since the **parcel** ID references in the **data** correspond directly to **locations** on the medium. That is, in the embodiment described above, the **parcel** ID represents an offset (plus parcel size) from the start of the single map data...

...CLAIMS region, wherein said geographic database is stored on a storage medium, and further wherein said **geographic** database includes **segment data** entities corresponding to portions of roads in the **geographic area** and nodal **data** entities corresponding to points in the geographic area including intersections of roads, wherein said improvement...

...region, wherein said geographic database is stored on a storage medium, and further wherein said **geographic** database includes **segment data** entities corresponding to portions of roads in the **geographic area** and nodal **data** entities corresponding to points in the geographic area including intersections of roads, wherein said improvement...

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DIALOG(R) File 348:EUROPEAN PATENTS  
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00919856

Interface layer for navigation system  
Zwischenebene fur Navigationssystem  
Couche d'interfacage pour systeme de navigation

PATENT ASSIGNEE:

Navigation Technologies Corporation, (2410910), 10400 West Higgins Road,  
Rosemont, Illinois 60018, (US), (Applicant designated States: all)

INVENTOR:

Ashby, Richard A., P.O. Box 351, Hebron, Illinois 60034, (US)  
Israni, Vijay S., 4431 Bayside Circle, Hoffman Estates, Illinois 60195,  
(US)  
Lampert, David S., 650 Beckstone Place, Highland Park, Illinois 60035,  
(US)  
Natesan, Senthil K., 397 Burke Drive, Carol Stream, Illinois 60188, (US)  
Killey, Grant S., 314 West Traube Avenue, Westmont, Illinois 60559, (US)  
Jasper, John C., 824 North Drury Lane, Arlington Heights, Illinois 60004,  
(US)  
Feigen, Jerry S., 2800 North Lake Shore Drive, Chicago, Illinois 60657,  
(US)  
Bouzide, Paul M., 1747 West Henderson Street, Chicago, Illinois 60034,  
(US)  
Fernekes, Robert P., 482 West Clare, Wooddale, Illinois 60191, (US)

LEGAL REPRESENTATIVE:

McLeish, Nicholas Alistair Maxwell et al (74621), Boult Wade Tennant 27  
Furnival Street, London EC4A 1PQ, (GB)  
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...SPECIFICATION 16 into a memory 20 associated with the processor 12 in  
order to operate the **navigation system**. The processor 12 may be of  
any type used in **navigation systems**, such as 32-bit processors using  
a flat address **space**, such as a Hitachi SH1, an Intel 80386, an Intel  
960, a Motorola 68020 (or...subsystem 210 resolves data access queries in  
terms of subdivisions of the physical media, called "**parcels**", which  
contain the requested data in the physical storage format of the  
**geographic data** 40 on the medium 22. The query logic subsystem 210  
also provides for management of...

...the entities into the logical data model data entities that are returned to the requesting **navigation application program** 200. Where the **geographic data** 40 stored on the medium are packed or compressed, the second function provided by subsystem...

...they may be transformed to the logical data model format. Another function provided by the **index** management and data translation subsystem is the provision for forward/backward compatibility across different versions...entities required for important functions such as route calculation or map display. Pervasive access to **data** offers some synergy with the **geographic** query qualifiers. For example, rectangular queries are commonplace for geometric data such as **segments** or nodes, but are also useful for street names and points-of-interest.

The query...to allow physical I/O to occur in parallel with other activities. This allows other **navigation application software** functions 200 or data access interface layer **software** 41 to continue to run while a physical I/O transaction is in progress. The...This reordering is based on several factors, including the priority of the request, the physical **location** of the **data** on the media, the current read head position. Other factors may also be included. Note that even within a single transaction submitted by a single **navigation application** process, multiple **parcels** may be specified. This means that I/O reordering can result in increased performance even when only a single task is requesting data (i.e., "functional level granularity"). Additionally, because **index** and data information may appear redundantly, particularly for physical storage formats for media with relatively...described above, which is a decompressed format. The interface layer accepts calls that allow the **navigation application** to formulate a query for data. These calls may be qualified by **spatial** as well as non-spatial attributes of the desired entities. The attributes used to qualify...

...to resolve a query transaction.

When the query logic subsystem 210 receives a call for **geographic data** from the **navigation application program** 200, the request may be in the form of a "geo-coded" request. This means that the **navigation application** 200 wants **data** relating to certain **geographic** conditions or boundaries. The query logic subsystem 210 resolves the request into **parcel** ID's by mapping the request to a set of parcels so that the data can be retrieved from the medium. This is done using the **index** management subsystem 242. Accordingly, it may necessary to first access the **index** data in order to identify the **parcel** ID's of the **geographic data** needed to respond to the query. Commonly-used **index** data may be read into memory at initialization time. If the desired **index** data are not already in memory, they are read from the medium.

Once the parcel...

...CLAIMS and processing requests and index information, said indexes managing means providing an identifier for obtaining **geographic data** on said physical storage medium for responding to said requests by said **navigation application program**.

6. The invention of Claim 5 wherein at least a portion of said index information is located on said storage medium, and wherein said indexes managing means provides **parcel** identifiers for obtaining pointers to parcels on said physical storage medium containing **geographic data** for responding to said requests by said **navigation application program**.
7. The invention of Claim 5 wherein said indexes managing means further comprises:

an interface...said interface layer further comprises:

an indexes management program means responsive to said query logic **program** means and adapted to associate said requests from said navigation application program portion with **parcel** identifiers associated with **parcels** in said physical storage format containing **geographic data** and to provide said **parcel** identifiers to a memory management library program means to obtain said parcels to provide to...

...medium, and wherein said indexes management program means further comprises means to obtain pointers to **parcels** on said physical storage medium containing **geographic data** for responding to said requests by said **navigation application program** portion.

26. The invention of Claim 24 wherein said indexes management program means further comprises...

...in a physical storage format, the method comprising:  
accepting a request from one of said **navigation application program** functions for **geographic data** ;  
using an index to identify a **parcel** in said physical storage format that includes the geographic data for responding to said request;  
transforming **geographic data** stored in said physical storage format in said **parcel** into a format usable by said **navigation application** ; and  
providing said transformed **geographic data** to said one of said navigation application program functions.

29. The method of Claim 28...

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Method and apparatus for selecting a destination in a vehicle navigation system

Verfahren und Vorrichtung zur Auswahl des Ziels bei einem Navigationssystem im Fahrzeug

Methode et appareil de selection d'une destination dans un systeme de navigation pour vehicule

PATENT ASSIGNEE:

Visteon Technologies, LLC, (2686100), 5500 Auto Club Drive, Dearborn, MI 48126, (US), (Proprietor designated states: all)

INVENTOR:

Oshizawa, Hidekazu, 21799 Almaden Avenue, Cupertino, California 95014, (US)

Fujii, Takao, 2-15-16, Yakyu-Cyo, Higashimatsuyama-shi, Saitama 350, (JP)  
Hamahata, Toshihiro, 13-5, Wakitashin-Machi, Kawagoe-Shi, Saitama 350, (JP)

Tanai, Haruhisa, 3-1-3, Yakyu-Cyo, Higashimatsuyama-shi, Saitama 350, (JP)

LEGAL REPRESENTATIVE:

Hill, Richard et al (75001), Wilson, Gunn, M'Caw, Cross Street 41-51  
Royal Exchange, Manchester M2 7BD, (GB)

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